

Consumer Reports

"FACTS YOU NEED
BEFORE YOU BUY"

VOL. 9, NO. 3

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VICTORY GARDENS

ALUMINUM CLEANERS

WORK SHIRTS

DEHYDRATED FOOD

STORING WOOLENS

BOOKS: CARE
& REPAIR

GRADE LABELING

REA

CU in Wartime

After the United States entered the war and certain types of consumer goods became scarce or altogether unavailable, CU received many letters which ran something like this:

"We've been CU members for a long time now, and we've always thought CU was very useful. We wouldn't have thought of buying a refrigerator or a vacuum cleaner, an electric iron or a toaster, without first consulting the REPORTS. Over the years, you've saved us the price of subscription a hundred times over—and we're duly grateful."

"But what about CU in wartime? We can't buy any of the big things CU used to test. And even our everyday purchases—canned foods, shirts, shoes, underthings, sheets—are very limited. Besides, scarcities being what they are, it's harder and harder to get the brands you recommend. . . ."

Frankly, we were a little worried by this attitude. We were convinced that CU was and would continue to be essential. But we weren't quite sure that our members would see, at once, the extent of our usefulness in a world at war.

Now we know. The kind of letter quoted above has just about stopped coming in. And many of

our current letters are written in the following vein:

"At the beginning of the war we wondered whether CU would be of much use in these times. We thought we'd continue our subscription, though, and see. We thought you'd like to know that, as time goes on, we thank our lucky stars that we DID decide to continue."

"True, we're not buying any of the big things any more. But we have to go right on buying the little ones. And without CU we'd be lost in a marketplace filled with shoddy merchandise selling at high prices. Whereas in the past we sometimes made little purchases without CU's recommendations, we wouldn't think of doing so today. The REPORTS are our watchdog against poor quality. It sometimes takes a little searching to find the products you recommend, but the end results are well worth the trouble."

Our thanks to the many members who have written letters like that. CU will go right on doing its best to protect consumers against the pitfalls of wartime market. Then, when the shooting is over, and durable goods are back on the consumer market again, we'll be right in there testing and reporting on postwar refrigerators, automobiles, electrical equipment and the new products of the postwar world.

CONSUMERS UNION is a non-profit organization chartered under the Membership Corporation Laws of New York State. Its purpose is to furnish unbiased, usable information to help families meet their buying problems, get their money's worth in their purchases, develop and maintain an understanding of the forces affecting their interests as consumers. Consumers Union has no connection with any commercial

interest and accepts no advertising; income is derived from the fees of members, each of whom has the right to vote for candidates to the Board of Directors. More than 70 educators, social workers and scientists sponsor Consumers Union and a national advisory committee of consumer leaders contributes to the formulation of policy (names of the members of the committee will be furnished on request).

CONSUMER REPORTS each month gives comparative ratings of a variety of products based on tests and expert examinations, together with general buying guidance, information on medical and health questions, and news of happenings affecting the consumer's interests. The Reports is the manual of informed and efficient consumers the country over.

THE BUYING GUIDE (published as the December issue of the Reports) each year brings together information from all the preceding issues with new material and special buying advice. Pocket-size, 384 pages, with ratings of several thousand products, the Buying Guide is an invaluable shopping companion. Every member gets a copy of the Guide with his membership.

BREAD & BUTTER reports each week on new and predicted price and quality changes in consumer goods, interprets Washington legislation as it affects consumers, reports government regulations and actions on the consumer front, advises on food buying and preparation.

SUBSCRIPTION FEES are \$4 a year, which includes subscription to the Reports and Buying Guide and Bread & Butter; \$3.50 without Bread & Butter (for foreign and Canadian memberships add 50¢). Reduced subscription rates are available for groups of 10 or more

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Grade Labeling: CU's Reply

This is a request editorial. Or perhaps "command" would be a better word. Many CU members, it appears, read the *Saturday Evening Post*, and the *Post*, a few weeks ago, published an article attacking grade labeling. The article, like so many *Post* advertisements, assumed that the intelligence of *Post* readers never got past the twelve-year level. But to judge from the letters and telephone calls which have come into the CU office, the *Post* has many readers who are mature enough to be angered by such hysterical, flag-waving attacks on grade labeling, and on the government officials, agencies and organizations supporting grade labeling. And some of these readers have insisted that CU reply.

The tone of the *Post's* tirade is set by a quotation from Lou Maxon, advertising agency executive and former deputy director of OPA who almost, but not quite, succeeded in making OPA the Washington office of the canner's association before he "resigned." This is the Maxon gem:

"Grade labeling, in my sincerest estimation, presents the greatest threat to American industry and our way of life that ever existed. . . ."

A QUALITY MEASURE

Now grade labeling, essentially, is nothing more or less than a guarantee that a product meets certain clear and definite standards of quality. Grade labeling is to quality as yardsticks are to length and scales to weight. If grade labeling is a threat to our way of life then so is the requirement that grocers use honest scales.

What Mr. Maxon and the *Post* are saying, in effect, is that American industry will be destroyed if business is forced to disclose the quality of the products it sells to consumers. That's pretty insulting to American business. Frankly, we don't think consumer goods are quite that bad. We don't even think that the products of the H. J. Heinz Co., which employs Mr. Maxon's advertising agency, are that bad.

Nevertheless, these charges, nonsensical as they appear, have a purpose. That purpose is to stifle discussion of the real issues surrounding the question of grade labeling by painting everyone who favors it as a dangerous radical, intent on destroying private industry.

Either you accept without reservation the claim that a product bearing a well-known brand name is *ipso facto* a good product, or you're a subversive element, according to Mr. Maxon, head of an advertising agency, and the *Saturday Evening Post*, a leading beneficiary of national advertising. What they're saying, in effect, is that an advertised brand name is a guarantee of superiority, and if you ask for any other guarantee, you're not trying to get high quality; you're trying to overthrow the American system.

Their technique for shutting off discussion is a familiar one. Why they use this technique becomes apparent when their claims are weighed against cold, hard facts. And here are some of the facts as determined by many thousands of laboratory tests:

First, most brand names, advertised or unadvertised, are absolutely worthless as a guarantee of quality. The tests have shown that the quality of a product, the ingredients going into it, the method of production—practically everything about a product—may change every

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Consumer Reports

"FACTS YOU NEED
BEFORE YOU BUY"

"Because it was established for the very purpose of aiding families to buy wisely, to avoid waste and to maintain health and living standards, and because it is the largest technical organization providing such guidance, Consumers Union recognizes a special responsibility to the nation. In full awareness of that responsibility, we pledge ourselves to do everything in our power to help Americans as consumers make the greatest possible contribution to the national need."—FROM A RESOLUTION ADOPTED ON DECEMBER 10, 1941, BY THE DIRECTORS.

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REPORTS ON PRODUCTS

CHIEF TECHNICIAN: Sidney Wang

Ratings of products represent the best judgment of staff technicians or of consultants in university, governmental and private laboratories. Samples for test are in practically all cases obtained on the open market by CU's shoppers. Ratings are based on laboratory tests, carefully controlled use tests, the opinion of qualified authorities, the experience of a large number of persons, or on a combination of these factors. Even with rigorous tests, interpretation of findings is a matter on which expert opinion often differs. It is Consumers Union's pledge that opinions entering into its evaluations shall be as free from bias as it is possible to make them.

Aluminum Cleaners

Some newly developed cleansers provide a good substitute for steel wool, some are very poor cleansers, others harm the metal, tests of 39 brands show

The wartime shortage of steel wool need not seriously disturb the fastidious housewife whose pre-war pans used to look like well-polished mirrors. For some of the new aluminum cleaners appear to be both satisfactory and inexpensive; in fact some housewives predict that steel wool will never regain its former popularity.

Not all the so-called aluminum cleaners on the market are satisfactory, however. Some are so harsh that they make deep grooves in the aluminum surfaces which no amount of later polishing will remove. Some are so mild that even long, hard rubbing with them won't clean badly encrusted aluminum. But in between are powders, pastes and liquids which have enough solvent and abrasive action to dislodge dirt relatively easily without damaging the surface on which they are used. And they have the advantage over steel wool that they won't rust or break off into small, sharp pieces that become embedded in the skin, as steel wool does.

Several brands of pads, either impregnated with a detergent or plain, are sold as aluminum cleaners. The two tested by CU (*Kleen-Up* and *Plas-Ti-Pad*) were made of plastic fibers or threads, and were definitely in the "Not Acceptable" class. Both were so harsh that they left deep, permanent scratches on the surfaces cleaned. It may be that at some future time, satisfactory plastic pads will be developed. Until then, however, CU recommends that you leave plastic

pads alone if you want to preserve your aluminumware.

Many standard brands of general household cleaners, scouring powders and metal polishes have added aluminum to the long list of things they'll clean. Most of them are not satisfactory for aluminum. Scouring powders are generally too alkaline and too harsh to be used safely for aluminum. Metal polishes are generally just that. They may be effective in putting a gloss on the surface of already clean metal, but they won't make much of a dent in the accumulations which become baked onto pan surfaces. Some of the general household cleaners were found to be safe and effective.

One exception was *Johnson's Shi-Nup* which, though claiming to be a "wonderfully effective cleaner and polish . . . for silverware . . . aluminum . . . chromium . . . artificial teeth . . . billiard, bowling, golf balls . . ." was found almost totally ineffective for cleaning dirty aluminum.

Good aluminum polishes—many recently developed in response to today's needs—come in several forms: powder, paste and liquid.

HOW CU TESTED

To approximate one of the most difficult types of dirt which aluminum cleansers are expected to remove, technicians burned a mixture of flour and grease on a polished aluminum surface, leaving behind a solid, charred mass which was stuck on the metal. Then, following the instructions given for each product, portions of the surface were scoured with each of the products tested. Each area was scoured for ten minutes, since the type of soil made by the burned mass was much more resistant than is encountered in the ordinary course of cooking.

Thirty-nine brands of so-called aluminum cleaner (16 pastes, 16 liquids, five powders and two pads) were tested in this way.

In addition to actual cleansing tests, laboratory examinations were made to determine acidity or alkalinity, volatile matter and abrasiveness of each product. None of the brands was found to be excessively acid or alkaline. The amount of volatile matter (mainly moisture) was used to determine the cost per dry ounce of the



Results of tests of 4 cleaners. No. 1 did good job on aluminum test strip; 2 and 4 were ineffective, and 3 (plastic pad) caused deep scratches.

product; where there was more than 70% volatile matter—or less than 30% solid matter—allowed by Federal Specifications for metal polish, this is noted in the ratings.

Prices of the aluminum cleaners tested varied widely—from 34¢ to 21.7¢ per ounce of dry weight. On the whole, the powders were the cheapest, and, as seen in the ratings, three of the five tested were in the "Excellent" category so far as effectiveness is concerned.

RATINGS

Products rated "Acceptable" can be used to clean aluminum more or less effectively without marring the surface. Brands classed as "Excellent" succeeded in cleaning the test surface within ten minutes, without marring the aluminum; all were mildly abrasive. Brands classified "Good" took somewhat more than ten minutes to clean the test surface, but were, nevertheless, considered effective cleaners. These, too, were mildly abrasive. Products classified "Fair" were also safe so far as abrasiveness was concerned, but the abrasives used in them were so soft that they required excessive rubbing in order to affect the dirt on the aluminum.

"Not Acceptable" products were divided into three groups: those that had little or no effect on the dirt; those containing abrasives so harsh that they damaged the aluminum; and one brand which was found to be highly inflammable. The last—*Blue Ribbon*—would create a serious fire hazard if used near an open flame.

ACCEPTABLE

In order of increasing cost per dry ounce within each group, but note comments at head of each group. Figures in parentheses represent cost per ounce of dry weight.

EXCELLENT

The following removed dirt easily, without damaging aluminum surfaces:

Household Institute (Household Institute, Chicago). 9¢ for 12-oz. box of powder (34¢).

Kay-Tee (Kay-Tee Products Co., Brooklyn). 15¢ for 14-oz. box of powder (1.1¢).

Lopoco (North Coast Chemical & Soap Works, Seattle, Wash.). 25¢ for 20 oz. can of paste (1.9¢).

Club (Club Aluminum Products Co., Chicago). 39¢ for 14-oz. box of powder (2.8¢).

A-Lum-Glow (Alumglow Cleansing Co.,

Long Island City, N. Y.). 47¢ for 1-lb. jar of paste (4.8¢).

NuSteel (Pynosol Laboratories, Inc., Chicago). 50¢ for 12-oz. can of liquid (8.2¢).

GOOD

While the following brands were somewhat less efficacious than those listed above, they were satisfactory and did not damage the aluminum:

Alumino (Lee Manufacturing Co., NY). 29¢ for 22-oz. jar of paste (1.7¢).

Dexta (A. S. Boyle Co., Jersey City, N. J.). 10¢ for 5-oz. box of powder (2.0¢).

Macy's Aluminum Cleaner (R. H. Macy & Co., NYC). 47¢ for 1 lb. 5 oz. jar of paste (3.5¢).

Metlbrite (Midway Chemical Co., Jersey City, N. J.). 10¢ for 6 fl. oz. (3.8¢).

Uncle Sam's Wonder Polish (Uncle Sam Chemical Co., N. Y.). 13¢ for 8 fl. oz. (5.4¢).

Rayosol (E. W. Bennett & Co., San Francisco). 30¢ for 8 fl. oz. can (9.1¢).

Dominant (Dominant Products Co., NYC). 30¢ for ½ pt. can (9.3¢).

Brite Boy (Brite Boy Co., Los Angeles). 29¢ for ½ pt. bottle (11¢).

Signet (LePage's, Inc., Gloucester, Mass.). 25¢ for ½ pt. can (12.1¢). Contained approximately 27% solid matter.

FAIR

The following required considerable rubbing in order to do an effective job of cleaning; they did not damage aluminum.

All Purpose 4 in 1 (Vapoo Products Co., NYC). 39¢ for 24-oz. can of paste (2.7¢).

Victory Cleaner (John Olney Products, Detroit, Mich.). 69¢ for 20-oz. jar of paste (6.1¢).

Macy's Liquid Silver Polish (R. H. Macy & Co., Inc.). 36¢ for 16 fl. oz. (6.6¢).

Noxon (Noxon Inc., Ozone Park, N. Y.). 17¢ for 8 fl. oz. (6.8¢). Approximately 27½% solid matter.

Trident (Trident Manufacturing Co., NYC). 55¢ for 18-oz. jar of paste (7.7¢). Mildly abrasive.

Electro-Silicon (Electro-Silicon Co., NY). 10¢ for 4-oz. can of paste (7.9¢).

Aimcee Silver Polish (Associated Merchandising Corp., NYC). 50¢ for 1 pt. can (9.8¢).

Red Cap (C. M. Kimball Co., Boston, Mass.). 25¢ for 8 fl. oz. (10.3¢). Approximately 27% solid matter.

Snow Bird Silver Polish. 15¢ for jar. Quantity not stated—contained about 4 oz. (12.9¢). Approximately 28% solid matter.

Rub-Less (Feiner Chemical Manufacturing Co., Inc., Springfield, Mass.). 20¢ for 6 fl. oz. (19.7¢). Approximately 17% solid matter.

NOT ACCEPTABLE

The following brands were so slightly abrasive that they were not effective in cleaning dirty aluminum surfaces:

Dif (Dif Corp., Garwood, N. J.). 10¢ for 6 fl. oz. (3.7¢).

Alupol (Langreen Co., NY). 53¢ for 21-oz. jar of paste (4.2¢).

Slick Shine (Slick-Shine Co., Newark, N. J.). 10¢ for 8 fl. oz. (4.4¢). Approximately 29% solid matter.

Wards Silver Polish Cat. No.—4266 (Montgomery Ward). 22¢ plus postage for 10-oz. jar of paste (5.9¢).

Silverbrite (Midway Chemical Co.). 10¢ for 5 oz. jar of paste (5.9¢).

Maid Of Honor Silver Polish Cat. No.—6583 (Sears-Roebuck). 22¢ plus postage for ½ lb. jar of paste (6.5¢).

Samoline (Samoline Corp., Cincinnati, Ohio). 35¢ for 1 lb. jar of paste (7.6¢). Approximately 29% solid matter.

Magic (The Magic Polish Co., Inc., NY). 50¢ for 1 pt. can (9.7¢)—in New York. In Detroit, 35¢ for ½ pt. can (13.7¢).

Johnson's Shi-Nup (S. C. Johnson & Son, Inc., Racine, Wis.). 23¢ for 8 oz. jar of paste (12.4¢). Approximately 23% solid matter.

The following products were excessively abrasive, and caused deep, permanent scratches on aluminum surfaces:

Bestmade Cat. No.—1915 (Sears-Roebuck). 21¢ for box of powder (2.5¢). Weight not stated—contained approximately 8½ oz.

Ultra Gloss (Ultra Chemical Works, Inc., Paterson, N. J.). 25¢ for 10-oz. jar of paste (3.3¢).

Kleen-Up (Metal Moss Manufacturing Co., Chicago). 3 impregnated pads for 10¢.

Plas-Ti-Pad (Plas-Ti-Fibre Corp., Chicago). 10¢.

The following brand contained an inflammable organic solvent which would create a serious fire hazard if the product were used near an open flame. In addition the product was found to be of little value for cleaning aluminumware.

Blue Ribbon (International Metal Polish Co., Inc., Indianapolis, Ind.). 29¢ for ½ pt. can (21.7¢). Approximately 20% solid matter.

The Buying Guide

The 1944 Buying Guide, due to come out some time ago, is still in the hands of printers and binders. We regret the delay, caused by unavoidable wartime conditions. We are still unable to promise a definite date of delivery, but every effort is being made to get the Guide into the hands of CU members at the earliest possible moment.

DEHYDRATED FOODS

Food preservation by means of drying has been in use since the days of our cave-dwelling ancestors. But it took the exigencies of war—need for increased storage and shipping space, for feeding soldiers and civilians in all extremes of climate and temperature, for preservation of precious foodstuffs with minimum use of metals—to turn dehydration from a hit-or-miss affair into a science.

There is a basic difference between the *dehydrated* foods of today and the *dried* products—such as prunes, raisins, etc.—which have been available for many years. *Dried* fruits are, in effect, still “damp.” They retain considerable water (which makes them edible without additional preparation), and are consequently lacking in two necessary factors: keeping quality and space-saving. Nor can they be dehydrated simply by prolonging the drying process; they would lose too much of their flavor and nutritive value.

Dehydration of food, as it is practiced today, is based on careful studies of temperature, pressure, time, sizes of food particles, action of enzymes, preservation of flavor and nutritive elements and packaging. And as a consequence of careful study and experiment, today's dehydrated foods, when rehydrated for use, often look better, taste better and retain more of their nutritional value than “fresh” food which has been carted around the country and then allowed to stand for days in the store before it is purchased and used. For food which is to be dehydrated is generally picked at its peak of maturity, then dried immediately under conditions calculated to give the most in the way of flavor and nutrition.

To find out how consumers react to some of the dehydrated products now being offered on the market, CU bought a large variety of the dehydrated foods and served a panel of eleven “judges” a series of lunches, made up entirely of dehydrated products. Following are some of the “menus”:

Vegetable Soup	
Sweet Potato Pancakes	
(made from dehydrated sweet potatoes)	
Instant Coffee	
Potato Soup	Tomato Juice
Buttered Carrots	Beanburger
Cranberry Sauce	Applesauce
Whole Milk	

The many new products on the market offer a foretaste of things to come when a greater variety of dehydrated products will be available to civilians. Meanwhile, dehydrated foods can and do find a useful place in many homes. CU here presents a review of the market, and some suggestions for use.

The judges were asked, in each case, to indicate whether they liked, disliked or were indifferent to the food offered; whether it tasted like the fresh product; whether they would serve it. The reactions varied with the different foods, but in general, there was good agreement for each food tasted.

DEHYDRATED SOUPS

Dehydrated soups have already found a place on many pantry shelves. The number and variety available have increased considerably since CU last tested and reported on them (see the *Reports*, February 1943). Generally speaking, the soups were flavorful and easy to prepare; they were cheaper in most cases, than similar canned products.

In addition to standard varieties, a few new wrinkles have been added. *Mary Lynn Vitaminized* soup mixes include a small capsule containing vitamins B₁, D and nicotinic amid. CU's medical advisors feel—along with most other doctors—that such haphazard reinforcement of foods is undesirable; if a vitamin supplement is needed it should be prescribed in a carefully balanced form, not taken casually in an occasional dish of soup.

Another new type of soup was *Soup-reme* Onion soup, made up in small, compressed bricks. Though the judges considered this brand good, they preferred the *French Kettle* brand of onion soup, tested last year.

GRAVIES & SAUCES

Various flavors and types of gravies and sauces can be bought in dehydrated form—plain, mushroom, tomato and other types of spaghetti sauce. They have many uses: as gravy on meat, fish and potatoes; as sauce for macaroni, spaghetti and rice; as

dressing for sandwiches; as extender for left-overs. In the taste tests, the sauces were poured over spaghetti. Judgments of the products varied. *French Kettle* Spaghetti Sauce was generally considered good; *Serv-A-Gravy* and *Tetley's* Spaghetti Sauce were found fair; several others were found too flat in taste. The general consensus was that much room still remains for improvement. None of the sauces took more than a few minutes to prepare; their cost ranged from 5¢ to 15¢ for a cup of the finished product.

“DINNERS”

The “7-minute macaroni dinner” has been a familiar item for some time, and many housewives have found it a convenient last-minute meal. CU shoppers found two additional dehydrated main courses: *Tetley's Beanburger* and *Wyer's Rice Dinner*. *Beanburger* was a mixture of soy bean grits, wheat flour and flavoring; it could be used in itself as a meat substitute, or as an extender for chopped meat in making meat balls, meat loaf, croquettes, etc. Used plain, the judges considered it good.

The rice dinner consisted of precooked and dehydrated rice, with added salt, dehydrated onions, tomatoes, garlic, grated cheese, dextrose and spices. An additional cupful of tomatoes was required to complete the recipe. This, too, the judges found good, with the notation that it might be useful for a quick meal.

VEGETABLES & FRUITS

CU shoppers were able to buy dehydrated carrot strips, carrot juice cocktail, tomato flakes, tomato juice cocktail, apple flakes, parsley flakes, cranberries and sweet potato. With the exception of *Little Major* Carrot Juice Cocktail, which was unpalatable, all these were considered good, and in many cases, comparable to the fresh foods. Depending on seasonal changes in the prices of the fresh foods, the dehydrated products were more or less expensive: a four-ounce serving of applesauce made from *Sardik* Apple Flakes cost 5¢; a four-ounce glass of tomato juice made from *Sardik* Tomato Juice Cocktail Flakes cost 3¢; enough *Ocean Spray* Dehydrated Cranberries to make a pound or more of very good cranberry sauce cost 23¢ plus a pound of

sugar. Preparation of the finished product was quick and simple, though the uses were somewhat limited.

With the exception of cranberries, the products listed above could not be used where the whole fruit or vegetable is needed, as they were sold in more or less pulverized form. No candied sweet potatoes could be conjured from *Vita-Yam*, but mixed with a few other ingredients, the powdered sweet potatoes could be made into excellent sweet potato pancakes or pie filling. *Sardik* or *Kanana* banana flakes won't have the consistency of slices of fresh bananas with your breakfast cereal, but sprinkled over the cereal they do give the same kind of flavor. And baked into a pie or a custard, they are better than just an acceptable substitute.

Dried tomato flakes offer an additional advantage. They require no ration points, and can be advantageously substituted for canned tomatoes or tomato juice, especially in soups, sauces, etc. They are good in another respect: whereas use of part of a can of tomatoes requires refrigeration and more or less rapid use for the remainder of the can, you can use as little of the dehydrated tomato flake as you need, without the need for special precautions about the left-overs.

New Day Dehydrated Carrots were made from sliced rather than crushed vegetables. When cooked according to directions, they appeared similar to somewhat overcooked fresh carrots. The judges were divided about half and half in their opinions of the flavor of dehydrated carrots. All agreed that they seemed somewhat overdone—probably a fault of the dehydration rather than of the cooking.

MISCELLANEOUS

In addition to those mentioned above, a few dehydrated "specialty foods" were found on the market and investigated. *Sun Filled* Concentrated Orange Juice was a thick jam rather than a completely dried product. When used in its concentrated form as a spread, it was considered tasty by those who liked the rather tart flavor. Diluted with water to form reconstituted orange juice, however, the rind flavor became comparatively strong, and the judges found it "Not Acceptable."

G. Washington and *Barrington Hall* were the two powdered coffees tested. Though the powdered coffees have not the aroma and body of

freshly-made coffee, the judges found them satisfactory. It was found that the strength of the brew, with such coffees, is very important in the final taste judgment, and it is well worth while for the user to try a stronger or weaker brew before rejecting the product.

Klim powdered whole milk—an old standby for formula babies—was another product tasted by the judges. Many considered that the "boiled" flavor of the reconstituted product made it objectionable as a beverage. But it can be used successfully in cooking. And it has the advantage of being available at any time without special storage—and without ration points.

OTHER FOODS

The products tested are actually only a small part of the long list of dehydrated foods. Many are being made but are not today available for civilian use. Tons of egg powder, dehydrated beef, potatoes, beets, snap beans and other vegetables are going to feed our armed forces and our allies. More tons are being prepared to help feed the starved countries as they are freed from occupation. And after the war, many of these foods will doubtless be sent to civilian markets.

THE FUTURE

Granted that dehydrated foods are in large measure a wartime development. Are they here to stay, or will they wane in popularity as they did after World War I? The answer must be partially guesswork.

Secretary Wickard puts an optimistic light on their future in his statement, "Imagine . . . what it would mean to the Idaho potato grower to get his product to Eastern markets without paying freight on seven pounds of water for every three pounds of potato." While this is unquestionably true, it is also unfortunately true that you can't make a baked Idaho potato out of dehydrated potatoes; nor can a juicy steak to go with it be made from dehydrated, chopped sirloin.

On the other hand, the busy housewife will doubtless find many dehydrated foods useful in preparing quick meals. Hardly any take more than a half hour to prepare, and most take far less. And though she won't be able to make steak with baked potatoes, she'll be able to cook up an appetizing meal of meat balls with mashed potatoes from the same basic ingredients. Dehydrated foods will also ease storage problems; they are compact, and they keep well even without special storage conditions.

Workers who carry their lunches may prefer to take a spoonful of tomato juice flakes and a little dried applesauce, rather than thermoses or jars of these foods. Unquestionably compressed and dehydrated foods will be a boon to hikers and campers, who won't have to spend half their energy carrying food to eat along the way.

A big immediate postwar use will be in rehabilitating the devastated, hungry people of the world, and in setting up food stocks to feed people in areas where famine and other catastrophe may strike.



Some typical dehydrated foods, and how they look in and out of the package. The products above were found "Acceptable" to CU's panel of tasters.

WORK SHIRTS

Tests of 26 brands indicate widespread quality deterioration coupled with price rises in many brands. Finding a well-fitted work shirt is a difficult job, tests show

"The best dressed army in the world" is widely accepted as a correct description of our men on the battle front. But it's far from apt for describing the army on the production front at home. For while our troops are getting—as they must get—clothes which wear well, fit well and are, in a general way, fine examples of what advanced American production techniques can produce, the fine techniques seem to dwindle away when it comes to producing work clothes for the men at home. Or at least that is what the results of CU's tests on 52 work shirts would indicate. For quality has taken another sharp drop since CU made its tests on work shirts last Summer, and today a poorly-cut work shirt appears to be the rule rather than the exception.

Almost everything that could be wrong was wrong with the way the shirts were put together. Tails were too short, sleeves were too short or too long, shirts were too small across the backs and chests, armholes were cut too small, and the collars, in a majority of the shirts were either too large or too small.

MEASUREMENTS

Using the Federal Specifications set by the Department of Commerce as a standard for government purchases, CU measured various dimensions of each shirt. All measurements were made after laundering. To allow for the vagaries of the manufacturing process, the following tolerances were allowed in the various dimensions, before the shirt was considered either skimmed or oversized in that measurement: $\frac{1}{2}$ inch for length, sleeve, armhole and chest; $\frac{1}{4}$ inch for yoke (the part over the shoulders); $\frac{1}{8}$ inch for collar size.

LENGTH: Of the 52 shirts tested, 20 were skimmed in the length, fifteen of them two inches or more. Such skimpering would be annoying in any shirt; it's particularly so in work shirts, for with the bending and stretching involved in many kinds of

work, chances for keeping shirt-tails in become small.

SLEEVES: Eleven of the shirts had sleeves which were too short; sleeves of 18 were too long. Short sleeves mean torn cuff buttons or torn sleeves as the arm is stretched; long sleeves may be dangerous, since they are easily caught in moving machinery.

YOKE: Fifteen shirts were skimmed in the yoke; six of them, an inch or more. That means interference with the motion of arms and shoulders, with resultant rips at the tops of the sleeves and the shoulder seams.

ARMHOLES: Nine of the shirts had armhole openings at least one inch smaller than they should have been. Which doesn't make life any easier for the stout or muscular worker.

CHEST: The muscular, broad-chested worker won't derive much comfort from the fact that 17 of the 52 shirts tested were skimmed an inch or more in chest measurement.

COLLAR: Though there are no speci-

fications for collar measurements of work shirts, as there are for other measurements, the fact is that of the shirts tested, ten were smaller, and twenty were larger than marked size. It seems manufacturers rely on the fact that most wearers of work shirts don't button their collars anyway.

CONSTRUCTION

With one glaring exception—the sleeve placket—construction details such as seams, buttonholes, bartacking, etc., were satisfactory on the shirts tested. Poor placket construction was found in every shirt tested except *Macy's* chambray and *Auto-Brand* covert. None of the others had a sleeve placket which was long enough to permit easy ironing of the cuffs.

The number of stitches per inch—while falling below the generally accepted standard of 14—was judged sufficient for normal wear. Twelve to 13 per inch was the norm for the covert shirts; 11 to 12 per inch for chambray.

PRICE & FABRIC QUALITY

Despite much talk of price-maintenance in clothing, the sad truth is that of ten brands of chambray shirts tested in the Summer of 1942 and retested this year, there has been an average price increase of 12%, along with an estimated 20% deterioration in the quality of the material used.

In eleven brands of covert shirts tested both now and in 1942, price

What to Look For:

Look for the following when you buy work shirts:

- Hold the material up to the light. The weave should be tight and even, and light should come through in small, even pinholes.
- Look for a "sanforized" label, or ask for a written guarantee against shrinkage. Then, if the shirt fits when you put it on, you will have reasonable assurance of fit after laundering.
- Examine the buttons and buttonholes. The buttons should be well secured; the buttonholes should be sewn with close, even stitches, bartacked at the ends to prevent raveling. There should be five buttons and buttonholes, evenly spaced along the front panel of the shirt.
- Open the cuff placket. Try to select a shirt on which the placket is large enough to allow the cuff to be laid flat for ironing. The top of the placket should either be bartacked, or the placket should be made of a single, continuous piece of fabric, to prevent tearing.
- The pockets should be bartacked at the top corners to prevent tearing.
- Examine the yoke construction. The yoke should curve slightly downward from the back, and there should be adequate gathers at the back where it is connected with the yoke. This is to allow for necessary shoulder and arm motion.

has gone up 15%, with fabric quality more or less the same as it was when last tested.

WASHING & SHRINKAGE

The label "sanforized" in a shirt won't assure you a decent fit. All it means, is that a shirt will fit as well—or as badly—after washing as before.

Shirts will wear better if you wash them frequently, when they are not too soiled. The dirtier the shirt, the more severe laundering it needs to get it clean. And severe laundering contributes more to wearing out of the shirt than does the wearing itself.

HOW CU TESTED

Two samples of each shirt were tested for weight, tensile strength, thread count and resistance to abrasion. In addition, they were examined for construction (buttons and buttonholes, shape of yoke, construction of back, stitching, seams, construction of pockets), fit (measurements at collar, yoke, sleeves, length, chest, armholes), shrinkage and label claims.

On the whole, consistency of results was good within brands and types, and average results on the two shirts tested give a good indication of what may be expected of a given brand and type.

Brands in the "Best Buy" list and close to the top of the "Acceptable" list may be expected to give relatively good wear and fit; those listed as "Not Acceptable" cannot be relied on to fit well enough to be worn.

BEST BUYS

The following brands of work shirts were judged to offer the best value for the money in the order given:

Super Pioneer Cat. No.—3054 (Montgomery Ward). \$1.15 plus postage. Medium-count covert with good tensile strength and high resistance to abrasion. Sleeve cut large; chest skimmed slightly. Available by mail order.

Homesteader Cat. No.—3180 (Montgomery Ward). 85¢ plus postage. Medium-count chambray with good tensile strength and fair resistance to abrasion. Available by mail order.

Tractor (Frank & Seder, Philadelphia). \$1.29. Medium-count covert with good tensile strength and good resistance to abrasion. Bought at Frank & Seder, Pittsburgh.

ACCEPTABLE

In estimated order of quality

Super Pioneer Cat. No.—3054 (see "Best Buys").

Homesteader Cat. No.—3180 (see "Best Buys").

March, 1944



The buttonholes, unlike the one shown above, should have close, even stitches, with bartacks at the ends.

Tractor (see "Best Buys").

Lee (H. D. Lee Mercantile Co., Kansas City). \$1.55. Medium-count covert with fair tensile strength and good resistance to abrasion. Sleeves and collar oversized. Available nationally.

Uncle Sam (Arbuthnot-Stephenson Co., Pittsburgh). \$1.38. Low-count covert with good tensile strength and fair resistance to abrasion. Skipped in length, and collar measurements. Bought at Joseph Horne Co., Pittsburgh.

Tractor (Frank & Seder). \$1. Medium-count chambray with fair tensile strength and good resistance to abrasion. Sleeve oversized. Bought at Frank & Seder, Pittsburgh.

Osh Kosh B'Gosh (Osh Kosh B'Gosh Inc., Osh Kosh, Wisconsin). \$1.39. Medium-count chambray with fair tensile strength and fair resistance to abrasion. Slightly skimmed in chest; collar oversized. Available nationally.



Inspect shirts carefully before you buy. Construction defects, such as the unstitched portion of collar shown above, detract from durability and appearance.

Sturdy Oak Cat. No.—645 (Sears Roebuck). 89¢ plus postage. Medium-count chambray with fair tensile strength and fair resistance to abrasion. Sleeve oversized. Available by mail order.

President (Gimbel Bros., NYC). \$1.59. Medium-count chambray with good tensile strength and fair resistance to abrasion. Slightly skimmed in length; oversized sleeve, chest and yoke. Available at Gimbel Bros. Dep't Stores.

Par-Val (W. T. Grant Stores). \$1. Medium-count covert with good tensile strength and good resistance to abrasion. Slightly skimmed in yoke and chest; sleeves oversized. Available nationally in Grant Stores.

Iron Ace (The Fair, Chicago). 98¢. Medium-count chambray with fair tensile strength and fair resistance to abrasion. Collar oversized. Available at The Fair Dep't Store, Chicago.

Par-Val (W. T. Grant Stores). 98¢. Medium-count chambray with good tensile strength and fair resistance to abrasion. Skipped slightly in yoke and chest. Available nationally at Grant Stores.

Auto-Brand (Lewis-Meier and Co., Indianapolis). \$1.47. Medium-count covert with fair tensile strength and good resistance to abrasion. Armhole and chest skimmed; collar oversized. Bought in Chicago.

Homesteader Cat. No.—3181 (Montgomery Ward). 85¢ plus postage. Medium-count covert with fair tensile strength and fair resistance to abrasion. Skipped slightly in chest; collar oversized.

Macy's (R. H. Macy & Co., NYC). \$1.59. Medium count covert with good tensile strength and fair resistance to abrasion. Skipped slightly in length; oversized sleeves and collar. Available at Macy's Dep't Store, NYC.

Sweet-Orr (Sweet-Orr and Co., NYC). \$1.74. Medium-count covert with good tensile strength and good resistance to abrasion. Sleeve and collar oversized. Available nationally except in Texas, Alabama, Florida, Mississippi, Arizona, New Mexico.

Sturdy Oak Cat. No.—609 (Sears Roebuck). 89¢ plus postage. Medium-count covert with fair tensile strength and fair resistance to abrasion. Available by mail order.

NOT ACCEPTABLE

The following brands were rated "Not Acceptable" because of shimming or bad fit after washing:

Big Yank (Reliance Manufacturing Co., Chicago). \$1.49. Low-count covert with good tensile strength and good resistance to abrasion. Skipped in length, sleeves, yoke and chest. Slightly skimmed in collar.

America's Pride (Melton Shirt Co.,

NYC). \$1.49. Medium-count covert with good tensile strength and high resistance to abrasion. Skimped in length, sleeves and chest. Slightly skimmed in yoke and collar.

Big Yank (Reliance Mfg. Co.). \$1.49. Medium-count chambray with good tensile strength and fair resistance to abrasion. Skimped in length, yoke and chest; oversized collar.

Lee (H. D. Lee Mercantile Co.). \$1.29. Medium-count chambray with good tensile strength and good resistance to abrasion. Skimped in length, sleeves, yoke and collar. Slightly skimmed in armhole.

Auto-Brand (Lewis-Meier and Co.). \$1.41. Medium-count chambray with fair tensile strength and good resistance to abrasion. Skimped in length, armhole and chest. One shirt cut too large, the other was skimmed in the collar.

Macy (R. H. Macy and Co., Inc.). \$1.93. High-count chambray with fair tensile strength and fair resistance to abrasion. Skimped in length, yoke, and armhole.

Sweet-Orr (Sweet-Orr and Co.). \$1.49. Medium-count chambray with good tensile strength and fair resistance to abrasion. Skimped in length; oversized in collar, sleeves, yoke and chest. Available nationally except in Texas, Alabama, Florida, Mississippi, Arizona, New Mexico.

Headlight (Crown Overall Mfg. Co., Cincinnati). \$1.49. Low-count covert with fair tensile strength and fair resistance to abrasion. Skimped in length and sleeves; oversized yoke.

Headlight (Crown Overall Mfg. Co.). \$1.49. Medium-count chambray with fair tensile strength and fair resistance to abrasion. Skimped in length, sleeves, armholes, chest and collar.

Moths...

will make meals of your precious woolens unless you take precautions against them. Here are some methods you should follow to preserve your Winter woolens in the off-season

With today's shortages and high prices, proper storage of woolens has become a matter of great importance in the family economy.

As the season ends, don't just leave your unused woolens in drawers and closets, to be forgotten until next Fall; if you do, chances are they'll be in no condition for use by then. Get them all together and give them the kind of treatment and storage that will keep them safe from moths.

CLEAN BEFORE STORAGE

Never store soiled garments. Washable woolens—sweaters, socks, gloves, scarves, etc.—should be washed before they are put away. Winter coats, suits and dresses should be sent to the dry cleaner. Or, if they don't require cleaning, hang them for a few hours in the fresh air, then brush them thoroughly. Turn up collars, turn down cuffs, turn pockets inside out and brush. Pay special attention to places along the seams, under pleats, ruffles, etc. For heavy woolens, it's a good idea to go over seams with the small nozzle attachment of your vacuum cleaner. If there are any stains, remove them (see *Buying Guide* for instructions).

If you haven't enough storage

space, it's a good idea to have fur or heavy cloth coats stored at a reliable cleaning plant or department store. Often such service is provided free or at small cost at the time you have the garment cleaned. Be sure, however, to get a written guarantee covering moth and other damage before you store the coat.

When woolens have been cleaned, or brushed and aired, they should be free from moths and moth eggs. But they won't stay that way without further precautions.

If clothes are to be stored in bags, examine the bags before you put anything into them. Small openings can be mended with gummed paper. Hang the garments in the bag and suspend muslin or cheese-cloth sacks containing four to six tablespoonfuls of paradichlorobenzene near the top of each bag. Place crystals into the pockets and folds of garments, too. Close the bag, checking particularly at the corners, along the bottom, and where the hanger protrudes, to see that it is airtight. To make doubly sure, seal the bag with gummed paper or tape. Remember that unless the bag is airtight, your clothes will not be protected.

Don't rely on garment bags impregnated with tar, cedar or oil; they're no more effective than ordinary bags.

If you haven't enough space to hang garments, they can be stored flat, along with sweaters, gloves and other woolens. For this the basic requirement is a box, trunk or other container that can be made airtight. It's a good idea to line the box with a piece of clean paper. Then lay garments flat, covering each layer with a sheet of tissue, followed by a generous sprinkling of paradichlorobenzene crystals. A pound of crystals will take care of a good-sized box. Close the box and seal edges with gummed tape.

CEDAR CHESTS

Before entrusting woolens to a cedar chest, check to make sure that it's made of the right kind of cedar. Chests of solid red cedar heartwood contain a great deal of volatile oil and do give protection against moths, provided that they still give off a cedar oil odor, can be closed tightly and are not warped or cracked. Such chests may be veneered on the outside with other woods without affecting their value as moth protectors. But do not depend upon chests which are merely cedar lined. Unless you are certain that your chest is really moth-proof, play safe by sprinkling paradichlorobenzene crystals among the clothes, as outlined above.

PAPER WRAPPINGS

Woolens can be protected from moth damage by wrapping them in heavy paper or in several thicknesses of newspaper. If you use newspaper, first cover the garments with tissue to guard against newsprint marks. Before wrapping, use paradichlorobenzene crystals as described for storing garments in boxes. In wrapping, bend back the folds of the paper upon themselves at the edges and the ends of bundles. Then seal them down with gummed paper.

HATS, SHOES, ETC.

Hat and shoe boxes are ideal for storing small articles. Brush all Winter felt hats with a soft-bristled brush before storing. If they need to be cleaned, have this done before you put them away. Don't stack hats on top of one another if you want them to retain their shape. Wrap each one separately in tissue paper after sprinkling crystals of moth preventive over the surface.

Moths aren't quite as fond of suede as of wool, but they will use suede for emergency rations. If you want to play safe, brush suede shoes, bags and other articles that won't be used during the summer, and store as you would woollens. To keep stored shoes in good shape, it is best to stuff them first with paper. If you have any cardboard shoe boxes, they make an ideal storage place for shoes, as well as for other small items like decorative feathers, bows, belts, etc. Seal all boxes after you have put in a moth preventive.

Woollens which are used occasionally during the Spring and Summer and which are not stored should be inspected, brushed, sunned and aired regularly.

MOTHPROOFING SOLUTIONS

If you have permanent mothproofing preparations applied to your woollens by a cleaner, a laundry or a store, insist upon a written guarantee. And get assurance that the preparation does not contain arsenic.

An effective mothproofing solution can be made at home by dissolving one ounce of sodium fluosilicate in a gallon of warm water, and dipping into it the fabric to be treated. Sodium fluosilicate can be bought from any chemical supply house or from many drug stores.

HOUSEHOLD FURNISHINGS

In general, the procedures outlined above for clothing apply equally to household furnishings. But here are some further suggestions which may save time and energy:

BLANKETS AND COMFORTERS should be dry cleaned or laundered before they are stored. Then sprinkle moth crystals over half the surface, fold over the other half, sprinkle crystals on half the remaining surface and fold over again. Continue until the blanket is folded to the size you want for storing.

DRAPERIES, if they are kept on the windows, should be brushed frequently, especially within the folds. Better still, clean them with the nozzle attachment of your vacuum cleaner. Don't forget that mixtures of wool and rayon, or wool with any other fabric are just as susceptible to moth damage as is plain wool. If you don't take care, the moths will eat the wool fibers out of the mixtures. Sprays and vaporizing machines, which fill the room with an odorous mist, are of no practical value in moth control.

RUGS AND CARPETS are often stored with the rug cleaner. Sometimes storage is provided without additional charge. Before your rug is taken away, be sure to get a guarantee covering both cleaning and storing.

If you are storing your rug at home, first clean it thoroughly, vacuuming on both sides. Shampoo if necessary, then sprinkle the entire surface with paradichlorobenzene crystals, roll, and cover completely with strong paper, sealing the edge and ends.

When the rug is up is a good time to do away with the places in the floor where larvae may breed. Look for cracks in the flooring, and fill them with putty or plastic wood. Any cracks that cannot be filled in this way should be sprayed periodically with kerosene or an insect spray.

WOOLEN UPHOLSTERY should be cleaned frequently, since both the fabric and the stuffing underneath attract moths. And remember that slip covers are no protection against moth damage. Though moths won't attack the slip cover fabrics, they can and often do a great deal of damage underneath. Remove them from time to time, and make a careful inspection.

Clean upholstered furniture with the special brush or nozzle attachment of your vacuum cleaner. Remove cushions, and go over every bit of the surface, paying special attention to corners, portions under cording, etc. And clean the space under the furniture, as well.

It does no good to put moth balls or moth crystals under the cushions,

as the gas they give off is too quickly diffused.

Some furniture manufacturers treat their wool and mohair upholsteries with mothproofing solutions, which render them relatively free from attack. If your furniture is sold as "mothproofed," hold the seller fully responsible if any moth damage occurs. Ordinary upholstered furniture can be made mothproof by firms equipped to do the job. If you are having this done, check to see that the furniture is fumigated before the mothproofing process, and be sure to get a guarantee against moth damage for a definite period.

CLOSET STORAGE

Hanging a few mothballs inside a closet you use every day won't protect the clothes inside. But if you're lucky enough to have a closet entirely devoted to storage, the following suggestions may help:

First clean the closet thoroughly, and seal all cracks in the plaster and about the base boards with crack fillers. Equip door frames with rubber or felt gaskets, so that the door can be shut tightly at all points. On the top shelf, place a pan containing about a pound of paradichlorobenzene crystals for every 100 cubic feet of closet space, or put the same amount of crystals in bags, suspended from hooks. Keep the closet door tightly closed, except for the brief periods when you must put in or take out clothing. Replenish the supply of moth preventive from time to time.

Cedar closets of the type ordinarily found in homes cannot be depended on to protect clothing from moths. To play safe, take the precautions suggested above for ordinary closets.

Cardboard closets are not, in themselves, reliable protection against moths, even though they may be impregnated with various odoriferous substances. Treat clothes you keep in them as you would those in ordinary closets, checking occasionally to see that there is an adequate supply of moth crystals. If you have a whole closet full of things you won't be needing for some time, it's a good idea to seal the doors with gummed paper.

"Para" blocks and cakes and perforated boxes containing some crystals are generally of little value except, perhaps, as deodorizers. Generally they evaporate too slowly, and call for use of too little of the product to be able to build up a lethal dosage of the gas.

Moth Balls vs. Para

Paradichlorobenzene is much more effective than naphthalene moth balls or flakes for protection against moths. Para acts within 48 hours after woollens have been stored in it; naphthalene takes at least twice as long under the best conditions. Furthermore, the odor of paradichlorobenzene leaves clothing completely after a few hours' airing, whereas the odor of naphthalene often persists for days after the garment is removed from storage.

Because of this, CU recommends the use of paradichlorobenzene. It is available in drug and department stores for about 20¢ to 25¢ a pound.

VICTORY GARDENS

Good results need careful planning and hard work, plus knowing when and how to do it. This article gives advice which will help you avoid disappointments in the coming season; and it includes ratings of insecticides, fungicides, dusters and sprayers, and nurseries

Lots of good food came out of victory gardens in 1943. At the same time, lots of prospectively good food went to waste, in one way or another, as a result of gardening errors. In an effort to make 1944 gardens produce a bumper crop, it might be well first to review some of the common gardening errors of last year. Here are some important ones:

A LATE START. Much of the preparation for gardening should be done long before the ground thaws in the Spring. This includes the assembling of tools, seed, fertilizers, insecticides, etc., and the setting up of a carefully worked out garden blueprint. Then, when you're actually ready to start on the manual work, you won't have to rush out to the corner store for an extra package of seed or a new rake. And with early planning and purchase of supplies you'll have more time to shop around for the best materials, instead of having to make-do with what's available at the last minute.

MIRACLES IN PACKETS. As many gardeners discovered to their sorrow, miraculous new varieties, fertilizers, tools, insecticides and other garden products are seldom worth the money, time or space they take. Though there are constant improvements in garden-

ing apparatus and supplies, they're seldom of a sensational nature, and the wise gardener looks at them with some skepticism until they've been thoroughly tested and recommended by experienced users. Check with your State Agricultural Experiment Station before you decide on novelties.

TOO MUCH ADVICE. Self-styled experts—and many brand-new gardeners become "experts" in a few brief months—enjoy sharing their secrets of success. Which is all very fine, and is often a good way to learn new methods and techniques. But before you accept such well-intentioned offerings, submit them to careful scrutiny. Was Mr. Smith's success with potatoes due to the egg shells he buried in his hills, or was it just naturally a good year for potatoes.

DROUGHT. Many crops were needlessly destroyed because the earth was too dry. Aside from an inadequate water supply, this condition may have been brought about or have been accentuated by hilling of crops, or by too deep cultivation. Organic matter, mixed with the soil before planting, helps it to hold moisture. A three-inch mulch of grass, hay or even weeds, cut near by and applied as soon as the plants are tall enough to rise

above it, will do much more good than an occasional watering. Before a mulch is applied, all weeds should be killed by shallow cultivation.

LATE HARVEST. Most crops deteriorate soon after they have reached the point of perfection. Harvest the crops at the correct time (see page 69) to get the best—and in the long run, the greatest—yield.

BAD TIMING. Many gardens suffered from the old trouble—too little and too late. Weeding, thinning, pruning, tying, dusting and other jobs are much easier to do a few days before they are absolutely essential than a few days after. Try to keep a little ahead of your garden, rather than allowing yourself to be bogged down by the tasks that should have been done yesterday.

FLUFFED-UP SOIL. Gardeners who had light soil prepared by rototiller may have had poor germination of seeds because of the dry, fluffed-up condition of the soil. Gentle tramping or rainy weather will settle the ground and make it ready for planting after it has been prepared with a rototiller.

WEEK-END GARDENERS. Many people who were able to devote only week-ends to their victory gardens reaped unsuccessful harvests. For best re-



Plan your garden before the ground thaws . . . this includes setting up a detailed garden blueprint.



Was Mr. Smith's success due to the egg shells he buried, or was it just naturally a good year for potatoes?



Gentle tramping or rainy weather will settle the ground and make it ready after rototiller cultivation.

sults, gardens actually need day-in-day-out care. But there are some crops which are likely to be more successful than others for those who can spend only week-ends at the work. Avoid crops which must be picked at just the right moment of maturity or which must have constant attention to avoid destruction by insects (such as peas, corn, beans). Concentrate rather on varieties of vegetables that can be harvested at weekly intervals (beets, carrots, chard, squash, lettuce). Mulch the soil to conserve moisture. And be particularly careful to get weeding and insect control done as early as possible.

Disease & Insect Control

The control of insects and diseases, once they are established, is difficult, but their prevention is comparatively easy. The following procedures will help give the plants a healthy start:

PLANT VEGETABLES WHERE THEY WILL GET PLENTY OF SUNSHINE; shade favors disease.

CHOOSE VARIETIES adapted to your soil and climatic conditions. Don't be misled by catalog descriptions, however convincing; order kinds known to do well in your section, and use

disease-resistant varieties when necessary. Your State Home Gardening Bulletin will advise on varieties.

BUY STOCKY, HEALTHY PLANTS from a good grower. Don't buy boxes of crowded, spindly seedlings from stores, or fruit stock from just any convenient nursery. Don't buy strawberry plants, cherry plants or seed potatoes from Southern sources.

ROTATE YOUR CROPS. Plan to grow beans, cabbage, carrots, potatoes and tomatoes in a different place each year, and if possible, run the rows at right angles to their direction of the year before.

TO ESCAPE GRUBS, don't plant root crops or strawberries in freshly turned sod.

TO PREVENT SCAB, don't plant potatoes in areas which have been limed or to which wood ashes or heavy applications of poultry manure have been added during the last four or five years.

TO PREVENT SEED DECAY and damping off of seedlings, buy treated seed or dust it yourself with *Spergon* for beans and peas, and *Semesan* or a fixed copper dust for all others.

TIME THE SOWING of certain vegetables to escape their worst pests. For example, corn borer is bad in late as well as earliest-planted corn. The safest period is mid-season. Plan your canning crop of snap beans for the lull in Mexican bean beetle activity. The time varies for different sections; consult the horticultural department of your State Agriculture College.

AVOID DEEP PLANTING OF SEEDS, especially in heavy soils, and break the crust around sprouting plants of cucumber, squash and melon to hasten emergence and to prevent damping off.

SPREAD CUT WORM BAIT along the rows before the first plants emerge or are set out and repeat three or four times up to June 15.

After the plants are off to a good start try to keep them growing vigorously without check. This requires thorough soaking (not sprinkling).

When to Pick Vegetables

SNAP BEANS: when they snap readily and have soft, pliable tips. Let *Stringless Green Pod* stay on the vines a few days after the beans have begun to show in the pods.

SHELL OR HORTICULTURAL BEANS: when beans are fully formed, but before the pods are dry.

LIMA BEANS: before seeds are fully grown. Open a few pods to see.

BEETS: at any size until they get tough. *Long Season* beet never gets tough.

BROCCOLI: while all the buds are tightly folded. If you cannot use all the heads while they are buds, do not leave them to blossom, but cut off to encourage side shoots with more heads.

CABBAGE: any time after they have begun to form heads. Soft heads are good.

CARROTS: any time.

CAULIFLOWER: pull when curd has reached full size but before it has begun to open—usually eight to ten weeks after setting plants.

CHARD: when leaves are six to twelve inches long. Put larger leaves on the compost heap.

CORN: after the silk has turned brown. Before picking an ear, strip down the husk a little to see if it is ready.

CUCUMBERS: at any stage of growth before they are ripe.

KOHLRABI: when less than 2½ inches in diameter.

LETTUCE: before it begins to send up a seed stock.

MELONS: when the stems begin to crack where they join the melons and the fruit comes off easily with a little twist.

ONIONS: as soon as they are large enough to be worth using. Onions are ripe when the tops dry and fall over, and should then be pulled and dried for storage. Do not leave out in Fall rains to soften.

PEAS: before pods become too full.

POTATOES: may be used a few at a time while vines are still green. Will keep better in the ground than anywhere else after foliage dies, until freezing weather.

NEW ZEALAND SPINACH: Only three or four inches of newly grown tips are good. Cut off any not used to force production of a new set of tips.

SQUASH: *Yellow Summer Squash*—any time before the skin becomes tough. *Cocozelle* and *Zucchini*—when six to eight inches long. Fall and Winter squash can be eaten at any stage but are best when mature, that is, when shell is very hard to penetrate with the thumb nail. All should be picked for storage before the first hard frost. Do not bruise or they will not keep.

TOMATOES: if picked before fully ripe, and ripened indoors they are firmer. Before a heavy frost, pick the green tomatoes—some for making relish, some to ripen slowly. It is unnecessary to pull and hang the whole vine.

not more than twice a week during dry spells, shallow cultivation to keep weeds down, and sometimes extra fertilizer scratched in between the rows. A plant that has been weakened from any cause is inviting trouble. Moreover, it is susceptible to injury from the very chemicals you use to protect it from insects and disease.

Clean culture (sanitation) is of the utmost importance. Get rid of all weeds inside and outside the garden and you will destroy the safe refuge of many pests that live on weeds and spread from them to crops. Gather up all plant debris after each crop is through, and clean up thoroughly at the end of the season. Burn badly infected material at once. Fall ploughing or spading just before a hard freeze will kill many grubs.

To avoid spreading disease, do not work among beans while they are wet.

Eliminate ants' nests near plants by means of ant bait. Ants spread root lice (aphis) which may severely weaken the plants.

REPELLING ATTACK

Next in importance to prevention, as outlined above, is alertness in discovering and repelling the enemy at the very start of an attack.

Be prepared with spraying and dusting materials and equipment in good working order, and with information about the control of specific pests. Have the latest revised bulletin on pest control from your State Agricultural College. Its regular home gardening bulletin may be out-of-date for pest control, so get the latest mimeographed material, too.

Examine your plants often for eggs, insects and signs of disease, and

More on Gardens:

This article deals mainly with particular phases of gardening which have brought forth the greatest number of questions from CU members. General information on planning, varieties, soil preparation and fertilizers, together with ratings of seed houses, were covered in the April, 1943 issue of *Consumer Reports*. If you have a copy, better re-read it before you start your garden; if you haven't a copy, we shall be glad to mail one to you for 25¢.

be sure to look at the under-sides of the leaves. If you don't, you may have a severe infestation before you know it. In a small planting you can crush egg clusters and insects with your fingers, and hand-pick diseased foliage at the very start of trouble. Burn the debris immediately. Whatever means you use, get insects when they are young and easily killed, check disease before it gets established.

Learn when to expect each pest. For this your State Pest Control Bulletin will be helpful. If you keep a garden diary, it will show that certain insects and diseases always appear in your garden at about the same time each year.

Since the effectiveness of control measures often depends on exact timing in relation to the life history of the insect or the disease, recommendations of local experiment stations should be followed exactly.

Spraying and dusting must be thorough as well as prompt and well-timed. Pay particular attention to the under-sides of the leaves. Dusting is best done when the air is still and the foliage is damp—early morning or

late evening. Sprays are applied when the foliage is dry. A fine mist is needed, not a drenching; but be thorough in your coverage. Nicotine is most efficient in warm weather at temperatures over 70°. A repeat spraying or dusting within two or three days may be necessary to finish off an insect pest. When applying fungicides, cover the whole plant with a protective film and renew it whenever it wears off. Since rain spreads disease, apply fungicides before a rain and repeat afterwards if the fungicide is washed off.

Use the right kind of spray or dust for each pest. Fungicides do not kill insects, nor do insecticides prevent disease, and an aphicide like *Black Leaf 40* will not kill beetles and worms.

Pyrethrum, which many gardeners formerly used as an all-purpose non-poisonous insecticide, has been taken by the Army this year for malarial mosquito control in combat areas. Rotenone, the other non-poisonous general purpose insecticide, is very short. Our advice is: buy your supplies early and use rotenone only



Examine plants often for signs of disease . . . pay special attention to the undersides of leaves.



In spraying, a fine mist is needed, not a drenching; but be thorough in your coverage.



You can learn when to expect each pest. Certain insects always appear at about the same time each year.

where nothing else will do. Do not use rotenone for aphids (plant lice) on any plant. Use *Black Leaf 40* or tobacco dust instead. Use cryolite (poison!) for potato beetles and for worms and beetles on tomatoes and beans until pods and fruit form. After that use rotenone. Be economical of rotenone, but don't eat poison.

GARDEN MEDICINE CHEST

At the beginning of the season have on hand:

The latest edition of your State's bulletin on pest control.

A sprayer or duster (or both) of the correct size for your garden.

Paris green to make bait for cutworms, crickets, slugs or grasshoppers. Mix $\frac{1}{4}$ pound with one peck (five pounds) bran, one pint molasses (cheap grade from the feed store), two quarts water. Mix dry ingredients first. Three applications will be needed. This bran bait is better than commercial preparations and is not attractive to birds. Paris green is poisonous; care should be taken in its storage and use.

Ant Killer. *Apex* or *Antube*.

Copper dust (*Cuprocide*, *Metrox* Red Copper Oxide, or *Redoxide*), a small amount for dusting seeds. Also *Spergon* if you grow lima beans.

If you have only a duster, add:

Tobacco dust (fresh) for aphids (lice).

Copper-rotenone or copper-rotenone-thiocyanate dust for insects and diseases. These dusts will be sold under trade names not announced at this writing. If this double-purpose fungicide-insecticide is not available, buy:

Copper dust for diseases.

Rotenone dust containing not less than 0.5% rotenone or rotenone thiocyanate (*Loro* or *Lethane*) dust. For common insects not killed by nicotine, wherever cryolite cannot be used safely.

Cryolite dust without sulfur (Read the label), e.g. *Sears Garden Master* Insect Dust. Or mix talc, two parts by weight, with one part *Kryocide* or *Alorco* in a box with a few pebbles. For potato beetles and for beetles and worms on beans and tomatoes before pods or fruit form. Poisonous!

If you have a sprayer:

40% nicotine sulfate (*Black Leaf 40* is best) for soft-bodied sucking insects (aphids, leafhoppers, young plant bugs), not for beetles and worms. One teaspoonful in a gallon

of water in which pure soap beads or flakes have been dissolved. Always use soap.

Pure Soap Flakes or beads to use with the above (e.g., *Lux*, *Ivory*). Do not use any containing builders, which will burn the foliage.

Rotenone or rotenone-thiocyanate spray (e.g., *Red Arrow*, *Rotenone Insect Spray*) for beetles and worms where cryolite cannot be used safely.

Cryolite (*Kryocide*, *Alorco*) for beetles and worms on beans and tomatoes before pods on fruit form, and on potato foliage. Poisonous—follow manufacturer's directions exactly.

Powdered copper sulfate and hydrated spray lime for making Bordeaux, or ready-made Bordeaux. For vegetable and fruit diseases.

If you have both a sprayer and a duster, use *Black Leaf 40* rather than tobacco dust for aphids, and if you cannot buy a cryolite dust without sulfur, use a cryolite spray.

WARNING:

The complete withdrawal of new pyrethrum supplies and the acute shortage of rotenone are forcing many changes in insecticide formulae. In many instances old trade names will be kept but will stand for altogether different ingredients. In other cases new names had not been announced when this article was written. Therefore, before buying any insecticide, read the label for active ingredients. Remember, cryolite and fluosilicates are poisonous, sulfur may burn vegetable foliage, thiocyanates (*Lethane* and *Loro*) are OK as boosters for rotenone but are not recommended by themselves for use on plants.

INSECTICIDES & FUNGICIDES

• NICOTINE

BEST BUY

Black Leaf 40, the most reliable 40% nicotine sulfate.

ACCEPTABLE

N.P.C. Nicotine Sulfate 40%. Not as efficient as *Black Leaf 40*.

Tobacco Dust. Should be fresh. Good in hot weather.

Black Leaf 155. A nicotine bentonite spray, good for corn borer and for codling moth on fruit trees. Both a contact and a stomach poison, but not generally recommended as a pyrethrum or a rotenone substitute.

• PYRETHRUM

A non-poisonous contact insecticide which must be fresh to be effective. A very tight seal and storage under ideal conditions may preserve strength fairly well, but packages carried over from 1943 are suspect, and the 1944 supply has been taken for the Army. Therefore we do not recommend any pyrethrum spray or dust.

• CORN EAR WORM OILS

In the past these have been pyrethrum oils. This year dichloro-ethyl ether will be substituted for pyrethrum in most cases, but with no loss of efficiency. Can be applied with a medicine dropper, oil can or special applicator, but avoid an overdose, which injures the corn.

ACCEPTABLE

Cornrol—pyrethrum oil.

Cornfume—dichloro-ethyl ether.

Cornex—dichloro-ethyl ether.

• ROTENONE

Rotenone acts both as contact and stomach poison for insects and is non-poisonous to humans. Rotenone is selective as to the insects it can kill and may require up to 48 hours to take effect; it may be left on plants for three or four days before it loses its effectiveness as a stomach poison. The dust is preferred to the sprays for most purposes. It will keep for a long time if stored in an air-tight container away from the light. Because of the acute shortage of rotenone, it will be reinforced, in both sprays and dusts, with thiocyanates (*Lethane* and *Loro*), which are very good for this purpose. But since the new formulae which will be sold under the old trade names have not been tested, our ratings can only be tentative. However, we believe that the "Best Buy" brands of last year are likely to be good again. Avoid rotenone-sulfur dusts for vegetables.

ACCEPTABLE

(But read the labels for ingredients)

Rotenone Greenhouse Spray.

Serrid Super Agricultural Spray.

McLaughlin Gormley King Co. will offer a new rotenone spray not yet named (early February). Because of the high quality of their other insecticides, we believe this will be a good buy.

Red Arrow Garden Spray (rotenone this year); Bug-a-boo Garden Spray; Green Tox; Foliofume; Sea Green; Rotecide Spray; Rotenone Insect Spray.

Rotecide Dust.

NOT ACCEPTABLE

Rotenone dusts having less than 0.5% rotenone.

Rotenone-thiocyanate dusts. *Loro* and *Lethane* are thiocyanates.

● STOMACH POISONS AND BAITS

All stomach poisons except rotenone are poisonous to human beings. Baits are very poisonous. Use extreme care in handling and storing and keep children and animals away from the garden when they are being used. Arsenicals and fluosilicates (*Dutox*, *Cryolite*) should not be used on anything which is to be eaten.

BEST BUYS

Apex Ant Killer. Thallium sulfate in an efficient, safe container. The best ant bait. Cover openings with tape when not in use. Thallium sulfate is very poisonous.

Homemade paris green bait, for cutworms. See page 71.

ACCEPTABLE

Antzix; Magikill Ant Jelly; Lethelin Jelly; Tat. Thallium sulfate, very dangerous to handle.

Antube. Sodium arsenite. Not so efficient but less dangerous to handle than the above.

Dutox. Barium fluosilicate spray (poison). Limited use.

Kryocide; Alorco. Cryolite sprays. Very limited use.

Cryolite Dusts. Only if not combined with sulfur. Very limited use.

Garden Master Insect Dust. Cat. No.—1325 (Sears Roebuck). Cryolite.

NOT ACCEPTABLE

Antrol; Snarol (baits). Inefficient.

Hellebore. Inefficient.

Lead, magnesium and calcium arsenates. Very Poisonous.

● COPPER FUNGICIDES

Copper is slightly poisonous. Therefore, wash carefully vegetables on which copper has been used. Wash sprayer after using copper. Empty dusters after each use.

BEST BUYS

Cuprocide; Metrox Red Copper Oxide; Redcide. Dusts used for seed treatments and dusting plants.

Copper-lime dust 20-80. For potatoes and small fruits.

Homemade Bordeaux Spray. Dissolve 2½ tablespoons of powdered copper sulfate in a little water; stir six tablespoons fresh hydrated spray lime in a little water; combine and add water to make one gallon. Use at once. Throw away surplus spray.

ACCEPTABLE

Dry Bordeaux Powders (e.g. *Orchard Brand*, *Acme Bordeaux*, *Bordow*, *Copper-Hydro-Bordeaux*, *Niagara Bordeaux*, *Oxo-Bordeaux*). These ready-made Bordeaux are not so efficient as the home-made, but they are convenient.

NOT ACCEPTABLE

Ammoniated copper solutions (e.g. *Hammond's*). Not for vegetables or fruit.

● INSECTICIDE-FUNGICIDE MIXTURES

ACCEPTABLE

Copper-rotenone dusts having not less than 0.5% rotenone.

Copper-rotenone-thiocano dusts under various new trade names (e.g. *Insect Fungus Dust* by Eastern States Farmers Exchange.)

Hydroxide. Calcium arsenate and copper spray for potatoes.

NOT ACCEPTABLE

Acme All Round Spray. Contained lead arsenate.

Hortex. Satisfactory for ornamentals and sometimes for small fruits, but not for vegetables on account of the sulfur content.

Rotenone-sulfur mixtures. Not for vegetables.

Copper-lead-arsenate dusts. Poison.

● SPRAYERS AND DUSTERS

To lengthen the life of a sprayer, wash out and dry thoroughly after each use. Empty a duster every time you use it, since dusts often corrode metal.

Whatever the size or type, a sprayer should deliver a continuous, misty spray, and should have an interchangeable or swivel nozzle, so that the spray may reach either the upper or under sides of the leaves. It should not leak anywhere. Try small sprayers with water before buying. A compressed air tank sprayer should have a plunger that reaches at least two-thirds the depth of the tank. Unscrew it, take it out, and satisfy yourself as to its length. Short plungers make hard work. For ease in cleaning a four or five inch diameter opening is desirable.

ACCEPTABLE

Metal plunger-type dusters (e.g. *Feeny*, *Hudson*, *Eastern States*, *Sawco Dust-gun*). Very small (3-ounce) dusters wear out soon.

Open top compressed air sprayers, three to four gallons (e.g., *Smith Banner*, *Brown Open Hed* [probably best]). In buying any tank sprayer, check length of plunger.

Compressed air tank sprayers, one quart (e.g., *Smith Blizzard*, *Sprayit GV7*, *Sawco Compressed Air Sprayer*, *Harco Sprayer*). Try with water before buying a hand sprayer.

Knapsack Sprayers (e.g., *Champion*, *Siren*).

NOT ACCEPTABLE

Compressed air sprayers with small openings or with plungers that reach only half the depth of the tank.

Most small hand sprayers are not continuous and leak soon.

Hose sprayers (e.g., *Antipestik*, *Arnold*, *Insectogun*, *Hayes Elle*). Inefficient, inaccurate, not for general use.

Stirrup pumps and fire fighter sprayers. Not suitable for garden use.

Bellows dusters (e.g., *Woodason's*). More expensive and not as good as the metal plunger type.

Fiberboard dusters or sprayers (e.g., *Sears Pest Killer Duster* and *Handy Garden Sprayer*). Not durable.

Note on Fertilizers

A word to the gardener who cannot get or afford organic matter (manure, compost, leaf mold, etc.) to mix with his soil. Even with fertile soil you cannot get something for nothing for very long. Four to five pounds of Victory Garden Fertilizer per 100 square feet and an equal amount of limestone if the soil is acid, is not expensive, and with plenty of water and mulching you can grow good tomatoes, snap beans, corn, peas, beets, cabbage, carrots, cucumbers, Summer squash, chard, strawberries and grapes. Some kind of organic matter is indispensable, however, in the long run, for with chemical fertilizers alone, the soil gets poorer every year. Therefore, at the end of the season, as each section of the garden becomes clear, broadcast Winter rye seed and scratch in with an iron rake. Rye germinates at low temperatures. The next Spring fertilize with five pounds of Victory Garden Fertilizer per 100 square feet and plow in. (Digging it in will be very hard work.)

Gardeners who used peat in soil preparation last year should use some other kind of organic matter this Spring. Too much peat tends to make the soil fluffy, and drier than ever. A peat moss mulch can be dug in about twice without doing harm. The peat can be raked off and stored for the next year, or it can be composted with green stuff from the garden, or manure, to good advantage. Every garden should have a compost heap.

State Agriculture Colleges

The best source of information on garden problems is your own State College of Agriculture. Write for its latest revised bulletins on home gardening, pest control, small fruit growing, compost piles, early starting of plants, etc. Address the Horticultural Department of the State College for help on specific problems not answered in the bulletins. Most colleges will answer questions and send bulletins free, even if you live in another State.

Some colleges are noted for their work along certain special lines. New York State, for example, breeds new fruits at Geneva; Connecticut has extensive vegetable trials and is noted for work with sweet corn at Storrs; Pennsylvania State has vegetable variety trials at State College; Massachusetts has an herb garden and vegetable variety trials at the Field Station in Waltham.

If you can manage it, a visit to your own State Experiment Station (located at or near the State College) should prove most interesting. Make requests for information directly to the State Colleges of Agriculture; the State Departments of Agriculture, located in the State capitals, are usually poor sources of information.

The following list gives the location of the State Agricultural Colleges in the various States:

Alabama: School of Agriculture and Home Economics, Auburn.
 Arizona: College of Agriculture, Tucson.
 Arkansas: College of Agriculture, Fayetteville.
 California: College of Agriculture, Berkeley.
 Colorado: College of Agriculture, Fort Collins.
 Connecticut: University of Connecticut, Storrs.
 Delaware: School of Agriculture, Newark.
 Florida: College of Agriculture, Gainesville.
 Georgia: College of Agriculture, Athens.
 Idaho: College of Agriculture, Moscow.
 Illinois: College of Agriculture, Urbana.
 Indiana: School of Agriculture and Home Economics, La Fayette.
 Iowa: Iowa State College, Ames.
 Kansas: Kansas State College, Manhattan.
 Kentucky: College of Agriculture, Lexington.
 Louisiana: Louisiana State University, Baton Rouge.
 Maine: College of Agriculture, Orono.
 Maryland: College of Agriculture, College Park.
 Massachusetts: Massachusetts State College, Amherst.
 Michigan: College of Agriculture, East Lansing.
 Minnesota: Department of Agriculture, University Farm, St. Paul.
 Mississippi: Mississippi State College, State College.
 Missouri: College of Agriculture, Columbia.
 Montana: Montana State College, Bozeman.
 Nebraska: College of Agriculture, Lincoln.
 Nevada: College of Agriculture, Reno.
 New Hampshire: College of Agriculture, Durham.
 New Jersey: State College of Agriculture, New Brunswick.
 New Mexico: New Mexico College of Agriculture, State College.
 New York: New York State College of Agriculture, Ithaca.
 North Carolina: North Carolina State College of Agriculture, Raleigh.
 North Dakota: North Dakota Agricultural College, Fargo.
 Ohio: College of Agriculture, Columbus.
 Oklahoma: Oklahoma Agricultural College, Stillwater.
 Oregon: Oregon State Agricultural College, Corvallis.
 Pennsylvania: School of Agriculture, State College.
 Rhode Island: School of Agriculture, Kingston.
 South Carolina: Clemson Agricultural College, Clemson.
 South Dakota: South Dakota State College of Agriculture, Brookings.
 Tennessee: College of Agriculture, Knoxville.
 Texas: Agricultural College, College Station.
 Utah: Utah State Agricultural College, Logan.
 Vermont: College of Agriculture, Burlington.
 Virginia: Virginia Agricultural College, Blacksburg.
 Washington: State College of Washington, Pullman.
 West Virginia: College of Agriculture, Morgantown.
 Wisconsin: College of Agriculture, Madison.
 Wyoming: College of Agriculture, Laramie.

Bugs: Good & Bad

BENEFICIAL INSECTS

Ground beetles, syrphid flies, lacewing flies, lady-bugs or lady-bird beetles (except Mexican bean beetle, squash lady beetle). These are to be spared.

HARMFUL INSECTS, EASILY SEEN

SUCKING INSECTS: These are dangerous because, besides sucking plant juices, they spread virus diseases such as mosaic, for which there is no control. Use nicotine sulfate and soap or nicotine dust.

a. *Aphis* (plant lice). Usually on the under-sides of the leaves; small, winged or wingless, green, black, brown or reddish.

b. *Leafhoppers*. Small, very narrow insects, usually on the under-sides of the leaves; hop away when disturbed and are hard to kill. Spray preferred.

c. *Plant Bugs*. These look like beetles, but they suck plant juices through a tube instead of eating tissue. They include squash stink bug and tarnished plant bug. Young bugs can be killed with a strong solution of nicotine sulfate (2 teaspoonfuls per gallon of water, with 2 table-spoonfuls of pure soap flakes or beads). Dusts are used as repellents. Destroy all weeds at the margins of the garden.

CHEWING INSECTS: These bite off plant tissue.

a. *Caterpillars, worms, beetles*. These can be killed with rotenone or cryolite. But do not use cryolite on any leafy vegetable or on any part that is to be eaten.

b. *Slugs, grasshoppers, crickets*. Use bran bait (see page 71).

HARMFUL INSECTS THAT HIDE OR WORK OUT OF SIGHT

SUCKING INSECTS:

a. *Thrips* (as onion thrips). These are very minute and hide in plant crevices; they are therefore hard to reach with spray or dust. They leave a white, chain-like mark on the leaf surface; badly-injured plants turn white. Treatment: nicotine sulfate and soap. Clean culture will aid in control.

b. *Root Aphis* (as on corn). Ants carry plant lice to roots along which

they have made burrows; the plant wilts. Use ant bait before the plant wilts if any ants' nests are nearby.

CHEWING INSECTS:

a. *Stalk Borers* (as corn borer, squash vine borer). These cause stalks to wilt or break, or both. "Sawdust" indicates the presence of borers; breaking over of tassels is one of the first signs of corn borers. Borers can sometimes be cut out of stalks or vines. Cut out and destroy infested tassels while borer is still in them. Rotenone, used at exactly the right time will kill corn borers; nicotine sulfate at the right time kills squash vine borers. Cover squash vines at the nodes to induce rooting. Control: clean culture; weed destruction.

b. *Corn ear worms*. These are large green caterpillars resembling cutworms, and eat the kernels on the cob. Treat with *Cornex*, *Cornfume* or *Corntrol* just as silk begins to dry. Apply to "silk channel" about 20 drops per ear with medicine dropper, oil can or special applicator. Avoid overdose. Cutting silk while still green will remove eggs. Best treatments only partially effective.

c. *Cutworms*. These are dull-colored naked caterpillars which feed at night and coil up during the day under rubbish or in the soil at the base of the plant. Young plants bitten off near the ground are their work. There are at least three groups which come at different times. Put out bran bait three times up to June 15; most effective on a warm night.

d. *Wire worms*. These are wiry, smooth, shiny, and about one inch long. They attack all root crops and tubers. Treatment: early plowing or deep spading; frequent cultivation; trap baits of potato in the Spring.

e. *White grubs*. These are identified by the fact that all the legs are near the head. They are injurious to potatoes, corn and strawberries. Do not plant on freshly-turned sod, and plow or dig over the soil just before freezing weather.

f. *Maggots* (as cabbage maggot, carrot rust fly). Wilting of any plant member of the cabbage family on a warm day is a typical sign of the cabbage maggot, but carrot rust fly injury may not show until the roots are pulled. Consult State bulletins on pest control. Remedy: clean culture; rotation of crops.

Small Fruits & Nursery Stock

If you have more space than you need for vegetables, as well as extra time and patience, you may want to try growing some small fruits. Our advice is not to attempt tree fruits unless you have plenty of room and are prepared for a lot of trouble and disappointment. All varieties of tree fruit are subject to frequent attack by serious disease and insect pests which are very hard to combat with ordinary home equipment. Small fruits (berries, grapes) are much more likely to be successful. They take less space, less spraying and dusting, and less time before bearing.

BUYING NURSERY STOCK

For the home gardener, buying nursery stock is much more of a gamble than buying vegetable seed. The nurseries recommended below are believed to be unusually reliable for the quality and trueness to name of their stock, but even the best nurseries are likely to be careless about filling small orders. As a result, the home gardener can never be absolutely certain of getting the variety he ordered. The most practical procedure is to order early from one of the recommended nurseries, keeping the bill for your stock, and asking for replacements if you should discover that a wrong variety was sent. Unfortunately, this may not be possible until the fruit matures, from two to five or more years hence. Since planting the right varieties has much to do with success or failure in fruit growing, reputable nurseries guarantee their stock to be true to name and replacements are your right.

To continue with disagreeable truths: State inspection laws are no real guarantee that plants will be free of disease and insects, for a diseased plant can pass inspection if the law does not cover that particular pest. Even the lists published by the Ohio and New York Agricultural Experiment Stations, of nurseries inspected for mosaic on raspberries, have not proved altogether reliable in practice, for after a nursery has been inspected it may buy additional stock from an infected source. Disease already in the plant often waits some time before showing itself, but you have no comeback on a nursery for a pest which you did not spot when the plant was delivered.

Reject at once raspberry plants with wart-like galls on their roots or

plants which seem to have galls cut from the roots before shipment. This is "crown gall," an incurable disease. Reject raspberries or blackberries with oval sunken spots on the stems (anthracnose), and reject any stock with scale on the canes. Reject strawberries with dark colored roots ("root rot").

Going to the nursery yourself and taking your stock home with you gives you an opportunity to examine the stock to see that it is well-grown, free of obvious disease and insects, has well-developed root systems and unbruised branches and stems. But it is no protection against virus disease infection or misnamed varieties. In fact, an early order by mail, to a good grower is better insurance of trueness to name than visiting a nursery during the Spring rush.

On the whole, our advice is to order early, from one of the recommended nurseries, even if it is pretty far from your home. When ordering from a distance, however, do not be misled by catalog descriptions into ordering varieties unsuited to your conditions. Decide in advance, with the help of your State bulletin on fruit varieties, what kinds you want, and stick to them. Read carefully the guarantee regarding notification of failure to grow, and notify the nursery promptly if your stock is shriveled or wilted when it arrives, or does not show signs of life after being planted.

CARE IN HANDLING

A good nursery packs stock carefully, but nevertheless small bundles sometimes dry in transit. Always open your bales or boxes at once, examine the stock and water it. Take strawberry plants out of the boxes to wet them. Plants are very liable to become hot in transit, especially if the weather is warm. If woody stock is shriveled, it can sometimes be saved by soaking the whole plant in water for a day or two.

Plant stock as soon as possible—the same day or the day after receipt. If this cannot be done, you can keep the stock in good condition by heeling it in the ground; that is, digging a shallow trench in some protected spot, setting the plants in at a slanting angle and covering the roots firmly with moist soil. Plants may be safely left in this condition until the ground is ready for planting. While planting,

keep the roots covered with moist burlap to prevent drying out. If roots once dry thoroughly, the plant cannot live.

PLANTING

Strawberries, currants, grapes and gooseberries are the easiest fruits to grow, and they give the greatest return per square foot of ground (but if you live where white pine blister rust is a menace, you are not permitted to grow currants or gooseberries, which act as alternate hosts for the rust).

GRAPE VINES, properly watered, will bear in lighter, poorer soil than any other small fruit. The first good crop will appear the third year. The few essentials are 1) encourage good growth of vine, 2) provide suitable support, 3) prune annually, and 4) apply fixed copper or copper-lime dust or Bordeaux at the right time. (For this see your State grape-spraying schedule.) Old, neglected grape vines will usually bear well again after proper pruning. State bulletins on home fruit growing give pruning instructions.

Choose carefully the location for a new vine, for it may produce for 25 years or more. Any place that is sunny and well-drained will do, but protection from cold Winter winds is desirable, and when there is a choice, a Southern slope is best. As with all permanent fruits, grapes should not be planted in the middle of a garden area, but on one side.

Choose varieties carefully, for it takes four years to correct a mistake. *Concord* is the most widely adaptable, but may be too late, and its taste quality is not high. *Niagara* (white), *Delaware* (red), *Worden* (black) are good over a wide range, but there are other excellent kinds. Consult your State bulletin on fruit varieties.

Very early Spring is the best time for planting. From the best nurseries, two-year vines are preferred, but strong one-year vines are good. Prepare the soil as for vegetables, in an area of at least ten square feet per plant. Before starting to plant, trim the vines to two or three buds of last year's growth, and the roots to eight inches in length, and put in a pail of water. Dig holes 15 inches wide, 15 inches deep and eight feet apart. In the bottom of the hole, throw a couple of forkfuls of compost or grass sods upside down (but not witch grass). On this put several inches of loam on which spread the roots horizontally, seeing that they do not cross each

other, and at a depth that will bring one or two buds to the surface. Throw in several inches of the best soil and tramp it down. Repeat, putting the poorer soil in the upper part of the hole. Now water, and wait until all the water has drained away before finishing with loose soil. Do not hill the soil up, but rather have a depression to hold water. A permanent support is not necessary at first. During the first year, just remove weak growths leaving one or two of the stronger canes, and tie loosely to a stake. The yield from a good vine should be 15 to 20 pounds.

STRAWBERRIES can do well in any good garden soil. *Howard 17* (*Premier*) is particularly adapted to light soil and is a leading variety everywhere, but the quality is only fair. *Dorsett* and *Fairfax* have high quality, but production is rather low. Consult your State Agricultural Bulletin on small fruits to find best varieties for your area.

Do not plant strawberries on newly turned sod, on account of grubs. Soil preparation is as for vegetables. For best results, barnyard or poultry manure should be spaded under, but strawberries will do fairly well in rather poor soil, with four to five pounds of Victory Garden Fertilizer per 100 square feet, mulching and water during dry spells. Don't fertilize the Spring before picking. Since everbearing strawberries are not usually satisfactory, planting instructions are here given for only the standard sorts, which bear about 13 months from planting.

Early Spring is the best time to set plants. Protect the roots from drying out, and prune the roots to about four inches in length just before setting. Plant at just the same depth at which they had been growing, 18 inches apart in rows spaced three to four feet apart. Spread the roots out in the hole, firm the soil well, and water. During the first year keep the weeds down by shallow cultivation and remove all blossoms as they appear. In late Fall, just before the first hard freeze, mulch the bed with straw or any other coarse material that will not pack. The next Spring carefully remove part of the mulch, and start a new bed for the following year. Yield is one pint or more per plant.

RASPBERRIES and blackberries are not easy to grow. You must give them constant attention, pruning, fertilizing and care against disease and insects, and then you may lose them

from Winter killing. But berries from your own bushes can taste better than any you buy.

A raspberry planting will produce for from six to eight years. The bushes will stand a little shade for a small part of the day, but not the competition of tree roots. They require plenty of moisture and fertile soil. The soil should be well prepared before planting, and it pays to use plenty of manure or compost. Planting can be done in the Fall, but it is better in early Spring.

Buy disease-resistant varieties from a good nursery. Gifts from a neighbor are false economy if his planting is infected with mosaic.

Latham is a reliable variety but the quality is not high. *Marcy* is good, but may be killed by cold weather in regions north of New York. *Chief* is very hardy. *Milton* is good, hardy and disease-resistant, especially adapted to clay soil. Buy from New York State Fruit Testing Association, Geneva, New York.

Black raspberries are not recommended because they are very susceptible to mosaic. Purple raspberries taste very different from red varieties. Taste some before you decide to plant; you may not care for them. *Sodus* is a good variety and does not sucker. "Everbearing" raspberries need a long Fall and are better south of New York. *Indian Summer* is probably best.

Set the plants 2½ to three feet apart in rows seven feet apart, spreading the roots, firming the soil well and watering. Now cut the canes back to about four inches. If you have any reason to suspect anthracnose, cut to the ground and burn the canes. Plants from a good nursery should not need such treatment.

Frequent shallow cultivation and suppression of weeds is important. Each plant should develop one or two strong canes the first year. If growth is not vigorous, scatter Victory Garden Fertilizer or poultry manure around the plants and cultivate it in. There will be a few berries the second year and more the third. When mature, each plant should bear 1½ to two pints of fruit. As the planting develops, annual pruning is important. See State bulletins for further directions.

BLACKBERRIES require more space than do raspberries and they are scratchier to work with, but the procedure is the same. Plant 3½ feet apart in rows eight feet apart. *El Dorado* is a stand-

ard variety. Yield should be one to two quarts per plant.

NURSERIES

Small orders often get poor service from even the best nurseries. But you are more likely to get true-to-name, healthy, high quality stock from the following nurseries, recommended by CU consultants, than from most others, however well known.

HIGHLY RECOMMENDED

For Small Fruits:

W. N. Scarff's Sons, Carlisle, Ohio
Allen's Nurseries, Geneva, Ohio
Andrew's Nursery, Faribault, Minn.

Grape Specialist:

West Hill Nurseries, Fredonia, N. Y.

Strawberry Specialists:

George Rennie, Andover, Mass. Few varieties; A-1 quality.

W. F. Allen Co., Salisbury, Md.

Tree Fruits (Do not buy cherries from Southern nurseries):

I. E. Ilgenfrits' Sons Co., Monroe, Mich.
Bunting's Nurseries, Selbyville, Del.

Kelly Bros. Nurseries, Dansville, N. Y. (Also good for small fruits)
Malony Bros. Nursery Co., Dansville, N. Y. (Also good for small fruits)

GOOD SOURCES

Small Fruits:

Ackerman Nurseries, Bridgman, Mich.
Lovett's Nursery, Little Seber, N. J.
Oak Hill Nursery, New Buffalo, Mich.

Tree Fruits:

Root's Nurseries, Manheim, Penna.
Bountiful Ridge Nurseries, Princess Anne, Md.
Adams County Nursery & Fruit Farms, Aspers, Penna.

NOT RECOMMENDED

Maxwell & Bowdon, Inc., Geneva, N. Y.
Waynesboro Nurseries, Waynesboro, Va.
Worley's Nurseries, York Springs, Penna.

Ten-Cent Stores, Department Stores. Stock deteriorates fast under store conditions.

Mail Order Houses. Stock may be well grown, but packing is likely to be careless and replacements hard to get.

and run your finger along the inside hinge; then repeat the same process with the back cover. Now take a few—about ten—pages from the back of the book, and open them as you did the cover. Repeat with ten front pages, and continue, matching every set of pages from the back with an equal number from the front. When you get to the center, press down a little harder, and you'll probably find that all the pages will then tend to lie flat when you turn them. This process does take a few minutes, but if you can curb the desire to start reading for just that long, you'll be well repaid both in terms of saving the book and of saving yourself considerable irritation as the pages of the book flap shut.

MARKING THE PLACE

Considering that the average adult has been told dozens of times in libraries and schools how to mark a place, it is surprising how few people put the knowledge to use. *Don't* turn down the corners. Book paper is brittle, and sooner or later, the dog-ear will fall off. *Don't* close the book over a pencil or other bulky article, or turn it face down. Both practices tend to break the back. *Don't* put a paper clip on the page you want to mark; the clip leaves a permanent wrinkle on the page, and may even tear off a piece if it is taken off carelessly. The best practice—unless you have the kind of memory that makes marking pages unnecessary—is to insert a bookmark (a strip of paper will do) into the book as soon as you start reading it. Then, any time you want to lay the book down, you have a marker ready to show where you stopped reading. Some people, instead of using a bookmark, make a practice of inserting one edge of the dust jacket between the pages to mark the place. While this does the book no harm, it is not very satisfactory as a bookmark, inasmuch as the jacket edge tends to slide out if the book is moved.

If you want to protect your book covers, keep the jackets on. Some people paste the jacket corners to the inside of the book jacket to minimize the annoyance of flapping covers. But if you do this, remember that the cover is permanently mounted.

MENDING

Simple tears and loose pages are easy to mend at home. Gummed tissue is much used for this purpose.

BOOKS: Care & Repair

Modern mass-produced books are not built to last for a lifetime, as were the hand-bound volumes of the past. But proper care, and repair of minor damage can add greatly to the life of books.

Within the limitations of the space you have, it is best to keep your books in conditions that you would find comfortable yourself: not too hot or too cold, too damp or too dry; too dark or too light. Dry heat dries out paper, cloth and leather; direct sunlight fades and dries out bindings; dampness encourages molds and insects.

Books are best stored upright rather than laid flat; they're more convenient to handle that way, and consequently get less wear and tear as they are used. Don't cram bookshelves too full. Tight packing makes them difficult to remove without tearing the tops of the backs as the books are pulled out. And even if you do succeed in pulling them out without tearing, the friction on the covers won't do them any good.

If any of your shelves are only partially filled, don't allow the books to fall slant-wise on them. Provide supports for the end books. These are available in great variety, ranging

from simple library brackets to expensive, elaborately worked models. Or you can make satisfactory ones yourself by covering ordinary clay bricks with heavy paper, wallpaper, felt or leatherette.

Oversized books which won't stand on your bookshelves—atlases, music, etc.—should be laid flat. If you have enough, a stack of them can be used in place of a book end on an unfilled shelf.

Though dust is bad for books, haphazard housecleaning can do more damage than allowing a little dust to gather. If your bookshelves are built without backs, your books will get dusty much more quickly. You may find it worth your while to cover the backs of open bookcases.

For dusting books, a dry, unused paint brush is much more effective and easier on the books than an ordinary dust cloth. Or if your vacuum cleaner has a soft brush attachment, you may find use of this more convenient.

You can do more damage to a book in the first opening than in many readings. The first thing to do with a valuable new book—before you even begin reading—is to limber it up. First carefully open the front cover,

but though it has the advantage of being easy to apply, it is less than satisfactory since it turns yellow with age. In any case, it is hard to find on the market today. If you still have cellulose tape, small mending jobs are very easy. For this material is transparent, easy to apply, and very durable. But it is almost impossible to obtain.

A good substitute is rice paper (known also as Japanese tissue) or very thin onionskin paper. Both are inexpensive, and are available in art stores and library supply stores. You can make your own paste, if you wish, by boiling together flour and water. But unless you use a great deal of paste at a time, you'll probably find it worthwhile to buy a 10¢ jar of library paste. The latter can be kept in usable condition for a long time, as it contains a preservative, whereas homemade paste turns rancid. The only other supplies you'll need for most simple work are some wax paper and a brush or a few toothpicks.

If you want to mend a tear which has a "feathered" edge, apply a bit of library paste to the portion of the "feather" where there is no printing. Lay the two edges together so that the printing matches exactly, first having inserted a piece of waxed paper underneath the page, so that no paste is smeared on the adjoining leaf. Then insert another piece of waxed paper above the tear and close the book until the paste has dried.

When a feathered edge is too narrow to hold paste, or when a page has been cut, the procedure is slightly different. First place a piece of waxed paper under the leaf to be mended, apply paste to one edge of the tear, fit the edges together, and place a piece of tissue over the pasted portion. Rub down, and allow it to dry between pieces of waxed paper. When the mend has dried thoroughly, carefully pull off all loose tissue paper; the fibers of the tissue which adhere to the tear will usually hold it in a strong and relatively inconspicuous mend.

LOOSE PAGES

If a single page has come loose, it can often be reinserted simply by applying a line of paste, about $\frac{1}{8}$ inch wide to the inner margin, pushing the page well back into the book, and allowing the paste to dry after the book is closed. If the page extends a little beyond the other leaves, trim it even with scissors.

Loose pictures, maps or plates can be put back into place with mending tissue. Cut the tissue about $\frac{3}{4}$ inch wide, the same length as the page. Fold it lengthwise down the center, and apply paste to the outside of one fold. Then press the pasted portion, fold outside, along the inner edge of the loose page. After it is dry, apply paste to the other outside fold of the tissue, and press it down to the next page of the book, well back. Put wax paper over the pasted surface, and allow to dry.

If the loose page is very heavy, you may have to use two "hinges" instead of one. Follow the same procedure, first pasting both the hinges on to the loose page, then "hanging" the hinges to the previous and following pages.

MARGINS

Ragged margins are easily repaired by pasting a strip of tissue along the margin, down the length of the page, then trimming to page size. Allow to dry between wax paper.

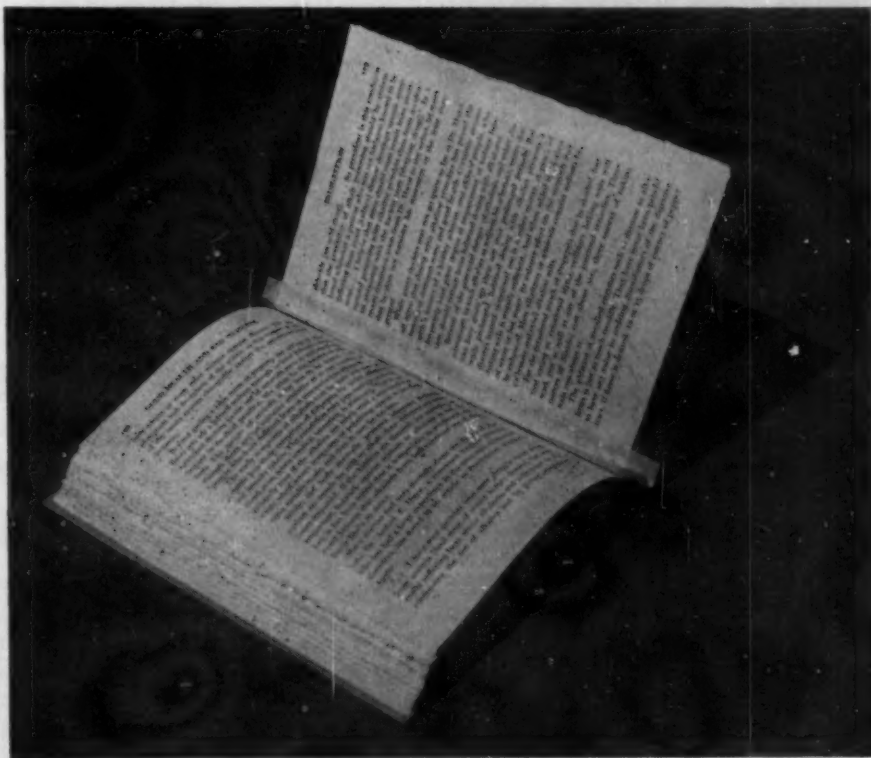
"Bites"—pieces torn from margins—can be repaired fairly inconspicuously with a little effort. Select a piece of paper as near as possible to the color and texture of the leaf to be mended. Place it under the bite, and trace on it the outline of the portion to be mended. Tear along the tracing so that a well-feathered edge remains.

Then paste this to the bite (using tissue if necessary), allow to dry between waxed paper, and carefully pull off excess tissue. Then trim to the correct size. Of course, if you don't care about appearance, you can dispense with the paper-matching and tracing. Just fold a piece of mending tissue or other fairly thin paper and cut double thickness somewhat larger than the tear. Apply paste to the whole inner surface, bring the fold even with the margin as a binding over the edge—one pasty side over each side of the torn page—press down and dry between wax paper. No trimming is needed.

A somewhat rumpled page can be flattened, if the creases are not too deep, by pressing it with a warm (not hot) iron, using a sheet of paper between iron and page as a protector. If the wrinkles are deep, or if the page is badly worn, you can reinforce the whole page with a sheet of transparent tissue pasted over its entire surface. Unfortunately, this impairs legibility somewhat.

It's axiomatic that hands should be clean when books are handled. But if pages do become soiled they can often be cleaned by rubbing with art gum (available at 10¢-stores or art stores) gently over them. Don't rub too hard, or you'll tear the page.

Badly soiled pages may need more



It's easy to insert a loose page in a book. Just cut a piece of tissue, fold, and paste onto the loose page and the adjacent one.

drastic treatment. Mud and other substances can be removed by washing the page with soap and water. Use a damp, soft cloth with mild white soap, and rub gently outward. Don't rub so hard that you remove the paper surface.

Edges of the pages can be cleaned with fine sandpaper. Turn the covers back, hold the pages of the book tightly together, and rub clean sandpaper over the edges of the leaves.

BADLY HURT BOOKS

More badly injured books require special material for home repair, but it is often possible to do a good job at very little cost. If you can't find a store that carries library supplies in your community, consult your librarian. She may be able to help you order needed materials by mail, through the catalogs librarians use to purchase their supplies.

If a whole section (signature) of a book is loose, it is best repaired with a stitched binder (two strips of gummed cloth, stitched together lengthwise down the center; about 35¢ a roll). Cut a strip of the binder the exact length of the page. Moisten one gummed side, and press down in the book against the adjoining page. Push it well into the back of the book, making sure that the stitching of the binder lies evenly along the fold of the section. This leaves a dry, gummed portion, ready to receive the pages. Moisten it, and place the section between the moistened surfaces, pressing them well in. Press down on both sides of the section, close the book and allow to dry.

If the contents of the book become loosened from the covers, they can be refastened with a double stitched binder (about 40¢ a roll). The width between the stitchings must be selected to correspond exactly with the thickness of the con-

tents of the book. Cut off a piece of the binder about $\frac{1}{8}$ inch shorter than the book pages. Cover the dark side of the binder with a thin glue, and allow to dry for a few seconds, until it becomes tacky. Apply glue liberally to the back of the contents, and carefully attach the tacky binding, making sure that the stitching lies exactly along the edges of the back. To insert the contents into the covers, it's best not to rely on the gummed material on the binding. Moisten this entire gummed surface with glue, place the covers flat on a table, and fit the contents into them. Close the book and press the contents into the back, restoring the book to its original shape by rounding the back and pushing in the sections from the front. Place the back of the book flat on the table, open one cover, and remove

any excess glue around the wings of the binder with a cloth. Then, with the cover wide open, push the edge of the cover firmly toward the contents. Again rub away any excess glue, put waxed paper between the cover and the book, and close. Repeat with the other cover. Close the book, place a weight on it, and allow to dry overnight.

It is possible to rebind a book at home, but the job is difficult, and cannot even be outlined in an article of this scope. Unless you have taken a course in bookbinding or have learned from an expert, better not attempt it. Any book which has wide enough margins can be rebound. Ask your librarian to recommend someone for the job, or get estimates from bookbinders listed in the classified section of your telephone directory.

Alka Seltzer

... and people still alkalize

A report from Miles Laboratories, makers of *Alka-Seltzer*, quotes a survey of 8883 men and women in ten large cities. 58.5% of them use *Alka Seltzer*, the survey claims. On the West Coast, *Alka Seltzer* is said to be even more popular; it's claimed that 65% of the people queried in San Francisco and Los Angeles admitted to "alkalinizing" in this way.

We're inclined to be somewhat skeptical of the statistics cited, but we're not exactly amazed at the general conclusion—that a lot of people use *Alka Seltzer*. We'd be far more surprised if the millions of dollars spent on ads urging consumers to "Keep on the Alkaline Side," "Relieve Acid Indigestion," "Be Wise—Alkalize," did not have their effect sooner or later—entirely aside from the question of whether they're true or false.

In this case, they're false without question. As CU has pointed out time and again, there's no need for an individual to dose himself with *Alka Seltzer* or any other product to maintain a normal alkaline reaction in the blood. "The reaction of the blood and the tissues is one of the most constant things in the life of an organism. In man, this reaction is normally slightly alkaline and it is kept so from conception to death by a number of delicate mechanisms. Any appreciable change in the reaction either to the acid or the alkaline

side will lead to serious symptoms or death.

Fortunately, because the body possesses remarkable natural defenses against both acids and alkalies, such changes rarely occur. . . .

So if it's just a matter of an occasional attack of gas, there's no need to spend money on *Alka Seltzer*. A pinch of bicarbonate of soda in a little water or soda will serve as well. And if you want to get all the "benefits" of *Alka Seltzer*, just add an aspirin tablet to the mixture.

Not so if your indigestion is chronic. That's something for your doctor to take care of, not your druggist. And don't, whatever you do, keep on taking *Alka Seltzer*. You incur two serious dangers: the possibility of neglecting a potentially serious ailment and the chance that the *Alka Seltzer* ingredients may—as they do in some conditions—intensify the very disease they are supposed to alleviate.

Promotion

CU is mailing a good deal of descriptive literature, these days, to lists of people who are being asked to become members of CU. But because of the nature of the lists, it is impossible to compare them with CU's membership list. Hence, such material is sometimes sent to those who are already CU members. If you're already a member, and receive material asking you to join CU, just ignore it—or better yet, pass it on to a friend who hasn't yet joined.



NEWS AND INFORMATION

FOR THE PEOPLE:

A digest of government actions
in the consumer interest

Nose Drops: Danger!

Back in 1936 (see the *Reports*, December 1936), CU's was the first publication to bring to the attention of consumers the dangers attending the use of nose drops containing mineral oil. At that time we pointed out, "For many years medical evidence has been piling up that mineral oil, dropped into the noses of children, especially very young children, may be drawn into the lungs. There it collects, causing irritation, inflammation and chronic pneumonia. The sequel is often acute pneumonia and death. . . ."

Later, CU published summaries of the evidence which had been collected, to show that the danger from mineral oil nose drops was not confined to the very young. There were reports of case after case of lipid pneumonia in healthy adults, directly traceable to the use of mineral oil nose drops.

CU named names—some of the best-known products on the market—such as Vick's *Va-Tro-Nol* and *Mistol*—were on the black list. CU demanded action by government agencies—and it began a long and active campaign to have these dangerous and worthless products taken off the market. CU's efforts, in which progressive doctors, health departments and socially-minded individuals joined, bore some fruit:

- Some city and state health departments prohibited the sale of nose drops containing mineral oil;
- Some hospitals forbade the use of mineral oil in the course of their treatments;
- Some manufacturers changed their formulas, so that their products no longer contained mineral oil;
- On the other hand, quite a few manufacturers, publications profiting from nose drop advertising, health departments and others resented CU's "interference" and insisted on their right to decide whether or not mineral oil nose drops were dangerous.

Finally the Federal Food & Drug Administration promulgated a regulation requiring warnings on the labels of all nose drops containing mineral oil, and FTC insisted that advertising contain some warning regarding their use.

The regulations are not very drastic—not nearly drastic enough, a great many doctors feel. But mild though they are, manufacturers and advertisers have fought them and violated them.

One of the latest offenders is Stanco, Inc., makers of *Mistol*, and their advertising agency, McCann-Erickson. In a stipulation with FTC, Stanco has just agreed to cease putting out advertising "which fails to reveal that these products should not be administered to undernourished infants, abnormally weak children or debilitated elderly persons; that frequent or excessive use of *Mistol* drops should be avoided; that frequent use of *Mistol* Drops with Ephedrine may cause nervousness, restlessness or sleeplessness, and that individuals suffer-

ing from high blood pressure, heart disease, diabetes or thyroid trouble should not use this preparation except on competent advice." If and when directions on the label contain the above warnings, *Mistol* advertising need contain only the statement: "Caution: Use only as directed."

We don't think the law goes far enough. We don't think that a note of warning on the label of a bottle of poison is sufficient protection against a substance that is sold in every drugstore and widely advertised in newspapers, magazines and on the radio. We consider it a disgrace that products which are capable of such harm can still be made and sold.

A fuller discussion of the dangers of mineral oil nose drops and of similar products will appear in an early issue of *Consumer Reports*.

Fleischmann's Yeast: An Old Offender

The Federal Trade Commission deserves the congratulations of every consumer for the precedent it sets in its complaint against an old offender, *Fleischmann's Yeast*. Along with more or less standard charges that Fleischmann's advertisements "falsely represent, among other things, that if one has colds which are severe or 'hang on,' he is deficient in vitamin A; if he is nervous, irritable and has poor digestion, a deficiency in vitamin B exists; if he tires easily or is aging prematurely, he is deficient in vitamin G; that all these conditions can be effectively prevented or corrected by the daily administration of *Fleischmann's Compressed Yeast* . . .," the complaint adds this new one:

"The respondent advertises that the use of its product constitutes an inexpensive way of adding the vitamin B complex to the daily diet and recommends the taking of two cakes daily, at a cost of 6 cents. According to the complaint, ten cakes a day for each individual, at a cost of 30 cents, are needed to provide the daily nutritional requirements of riboflavin, and *the same amount of money would be sufficient to purchase food that would insure against any vitamin deficiency besides providing significant quantities of other valuable nutritive substances and supplements.*" [italics ours]

It boils down to this: FTC has long recognized that advertising is false, and therefore subject to action, if the advertising makes false claims regarding the economy of the product in comparison with the economy of similar competitive products. In other words, if Fleischmann's were to claim that its yeast is the most economical on the market, FTC might, in the normal course of events, find that such a statement is unfair to competing products, and act accordingly. But in the current action, *Fleischmann's Yeast* is compared not with directly competing vitamin supplements, but with natural foods which are also sources of the same vitamins.

CU hopes that FTC's action against *Fleischmann's*

Yeast is only a foretaste of things to come; that the claims for other vitamin products will be similarly studied and, when necessary, acted upon.

L'Affaire "Miles"

When FTC issued a complaint against three Miles products—*Dr. Miles Liquid Nervine*, *Dr. Miles Nervine Tablets*, and *Dr. Miles Anti-Pain Pills* (see the *Reports*, September 1943)—Miles Laboratories tried to forestall action by asking the U. S. District Court for a judgment on the issue of whether FTC has jurisdiction over the labeling of drugs. And when this court dismissed the case, Miles carried the fight to the U. S. Circuit Court of Appeals.

A brief filed there in behalf of FTC states that it is "obviously proper and may be necessary" for the Federal Trade Commission to examine labeling of advertised products to determine whether advertisements referring to the labels are false and misleading. In this case, FTC's sole charge was that certain Miles ads were false in that they did not give, either expressly or by reference to labels, adequate warnings on the three above-mentioned products. But Miles refused to accept FTC's stipulation.

The reason was obvious. Sales of patent medicines are tremendous, and certain drug-manufacturers are hell-bent on limiting FTC's jurisdiction. It's expected that the Miles case will go to the U. S. Supreme Court as the first of a series of test cases filed by drug manufac-

turers vitally interested in curbing FTC in its efforts to protect the consumer. The U. S. Circuit Court of Appeals is expected to announce its decision soon. We'll keep you posted.

Anti-Freeze Solutions

With ethylene glycol—the best general anti-freeze—practically off the civilian market, various good, bad and mediocre products have been appearing as substitutes. FTC is finally catching up with some of the worst offenders.

On its list are *Antarctic* (The Winterine Manufacturing Co.), *Lo-Temp*, *Lo-Zone* and *Bond Top Line* (Chemicals of the South, Tennessee Valley Associated Marketers, Bond Anti-Freeze Factory, Lo-Temp Chemical Works, Lo-Zone Chemical Works), and *Wonder-Solv* (William I. Miller).

All the firms have been ordered to "cease and desist" representing that their products are safe and dependable for use in the cooling systems of automobiles, that they will not cause rust, corrosion, clogged passages, or other serious damage to the engine or radiator of an automobile, and that they are superior types of anti-freeze preparations. FTC found that all of them are composed of a magnesium or calcium chloride base which is inferior to anti-freeze solutions containing glycerine or alcohol bases.

For data on car care, see the *Reports*, August and October 1943.

Grade Labeling: CU's Reply

(continued from page 59)

year or several times a year without any notice to consumers, while the brand name remains precisely the same. Furthermore, products of different quality, different design, different materials, different workmanship, may be sold under the same brand name at the same time. These differences have repeatedly been found in CU's laboratory tests of advertised products.

And laboratory tests have also proved beyond a shadow of a doubt that by and large, advertised brands are not superior to unadvertised brands; that nationally advertised products often rate among the poorest of all the products tested.

Take towels, for example. Probably no towels have more advertising space devoted to them than *Cannon* and *Martex*. But in CU's tests of 20 brands of turkish towels (see the *Reports*, January 1944), *Cannon* was 13th in order of quality and *Martex* was 14th. The three "Best Buys" and the two towels heading the "order-of-quality" list were private brands.

In the case of men's shirts (see the *Reports*, February 1944), five private brands headed the quality list. The best of the nationally advertised brands—*Van Heusen Country*—was ninth in order of quality. Men's shorts provide another example of the unreliability of a brand name. In the tests of woven shorts (see the *Reports*, January 1943), *BVD* was fourth in order of quality, coming after three private brands. Which is pretty good. But in the tests of 46 brands of knit undershirts (see the *Reports*, February 1943), *BVD* was 46th in order of quality.

In some tests national brands do come out on top. In men's shoes, for example (see the *Reports*, July 1943), the well-advertised *Nunn-Bush* shoes had the highest

quality score. But does this mean that with shoes an advertised brand name can be accepted by the consumer as a guarantee of merit? Hardly, when other well-advertised brands such as *Hanover* and *Douglas* were at or close to the bottom of the "Acceptable" list (38th and 41st, respectively, in order of quality), and when another advertised brand, *French, Shriner and Urner Custom Grade*, was rated "Not Acceptable" because the heel lifts were made of paper.

Most of the argument against grade labeling has cen-



A grade-labeled can: it hardly looks as though the brand name had disappeared!

tered on canned fruits and vegetables, for which grades exist and are already in use on a voluntary basis by some packers. Mr. Maxon, The *Saturday Evening Post* and others who think 100% Americans eat brand names while only subversive elements look inside the cans, insist that such names as *Del Monte*, *Libby* and *Heinz* are all the quality guarantee any consumer needs. Again, what do the tests show?

Until its facilities were overloaded with war work, the government grading service in the Department of Agriculture did all of CU's tests on canned fruits and vegetables. CU's shoppers bought the samples in grocery stores in cities throughout the country, and they were shipped to the graders only after all labels were removed and code numbers substituted. The last full summary of these results appeared in the 1942 CU Annual *Buying Guide*. This is how the government graders rated *Del Monte*, *Libby* and *Heinz* products, as reported in the 1942 *Guide*:

Product	Del Monte	Libby	Heinz
Applesauce	—	C	—
Apricots	B	B	—
Baked Beans	—	C	C
Green Beans	A	B	—
Red Kidney Beans ...	—	—	C
Grapefruit Juice	C	C	—
Grapefruit Segments ..	B	B	—
Peaches	B	B	—
Peas	B	B	—
Pumpkin	A	A	—
Spinach	A	Substandard	—
Tomatoes	Substandard	Substandard	—
Tomato Juice	A	C	A

Where no grade is shown, CU shoppers were unable to find the brand in the stores.

We have a hunch that even the twelve-year-olds among *Saturday Evening Post* readers would understand, after studying this table, why some of the packers, the advertising agencies and the magazines such as *SEP* attack grade labeling.

There is a special reason why the biggest fruit and vegetable packers oppose grade labeling. With some packs, in some years, they couldn't provide grade A quality even if they wanted to. In a particular year, only a small percentage of a crop may be of top quality. To supply their huge market, the big national distributors would have no choice but to pack the lower grades. In such a year, and with such a crop, it is sometimes entirely feasible for smaller packers to sell grade A products with which the big companies can't compete on a quality basis. They would have to sell at a lower price. And this, of course, is precisely what they don't want to do. Why should they sell the contents of a can at a lower price when they can sell the brand name at a higher price?

Grade labeling neatly and simply debunks the claims of special and esoteric virtues attaching to highly advertised products; claims intended to make the advertised product a different *kind* of product which is not even competing with the cheap, unadvertised stuff. Grade labeling puts the advertised product back into competition—honest competition where it can be judged on its merits and its price.

The *Post* also argues that grade labeling is bad because there would be a considerable range of quality

within each grade, and, says the *Post*, "pity those who pay as much for a low grade B as for the product that almost makes grade A." They want your sympathy, too, for the packer who will get no more money for the high B product than another gets for a low B. But one of the reasons for a few grades, each covering a fairly wide quality range, is the inability of packers, even the biggest ones, to maintain uniform quality. But if they want something more exact than grade labeling, and are willing to put the precise numerical score on the label in addition to the grade, more power to them. Butter is often sold with the score shown on the label, proving that it can be done.

But even if grades covering a wide range are the best we can do, isn't it better to expect, say, average grade B quality and to get low grade B than to expect grade A quality in a can of *Del Monte* tomatoes, for example, and to get substandard—even lower than grade C. Furthermore, as even the most casual examination of CU's canned goods ratings will show, consumers often pay higher prices for grade C products than they do for grade A.

BUSINESS USES GRADES

A delightful sidelight on the whole controversy is the fact that in transactions between producers, brokers, wholesalers and banks—where business men are dealing with each other and not with consumers—the use of grades is standard practice. When wholesalers buy from packers or banks lend money on a shipment, they want to know what's in the can, not just what brand name is on the label.

The anti-grade-labelers insist that grade labeling would result in a general lowering of quality, since the producer would no longer have any incentive to put out the best possible product. Exactly the reverse is true. Far too often, advertising is a substitute for high quality and not an incentive to it. If you doubt this, look at the cases cited above. Advertisers know that consumers don't have the standards, the knowledge or the means which would permit them to make direct comparisons between products. The consumer who has been using an advertised brand which he finds satisfactory has no way of finding out that there may be a dozen other available brands which are both better and cheaper. Since this is true, the typical advertiser knows that the way to increase sales is to improve not the product but the promotion. The product may be changed—not necessarily for the better—if the changes lend themselves to use in promotion; but the main drive is to find new combinations of words to which consumers will react in the proper manner, beautiful faces and figures to provide glamour, or new comedians or movie stars to pep up the sales.

When grade labeling enters the picture, and to the extent that the consumers are educated to use the grades, there is a very compelling incentive toward improvement of the product or, where improvement is impossible, toward lowering the price. If spending more money for promotion is the way to get more customers, then you spend money on promotion. If improving quality is the way to get more customers, then you spend money to improve quality; grade labeling is the means to this happy end.

Does grade labeling destroy private industry and wipe out advertising as *SEP* claims? Well, chickens still seem to be laying eggs under private auspices, despite the fact

that eggs are grade labeled. Furthermore, in Canada, where the government requires the grade labeling of all canned goods, packing still remains in private hands and advertising goes merrily on.

We don't know whether there would be as much, less, or more advertising with grade labeling than without it, nor do we care. To the extent that honest advertising is used to promote the sale of a good product, we're all for it. To the extent that advertising is used to make consumers forget the grades and think in terms of special and wholly fictitious virtues, we're agin it. But either way, grade labeling would provide an easily-used yardstick for consumer judgment of products, and a means for consumer education in wise and economical buying.

Another contention of the *Post* is that grade labeling would mean the end of brand names. The argument is a silly one, since no one has asked for a law which would ban brand names and substitute grade labels for them. There is every reason to believe that what has happened both in this country and in Canada would fix the pattern for future grade labeling. A number of packers now have their products graded by government graders; their labels show the grade, and along with it—as prominently as ever—the brand name. The same thing has happened in Canada with compulsory grade labeling. The names of *Del Monte*, *Libby* and *Heinz* continue to flourish under Canadian requirements—grade label and all.

For those who may still be uneasy about the charge that grade labeling is subversive and un-American—the Hearst press has been editorializing on this theme for a long time—we want to enter a further denial. Anything that promotes honesty and fair dealing in business is good American, and grade labeling does that. Anything that helps improve living standards is good American, and grade labeling does that. But it does something more, too, and for business itself.

Unquestionably advertising has, despite its misuse, brought important benefits to industry and to the American people. But increasingly, great corporations with almost unlimited millions of dollars available for the purpose, have used advertising to tighten their monopolistic control in their particular fields. Increasingly, advertising has been used as a weapon for the destruction of small business. In certain fields, by helping the small producer or distributor compete even without big funds for advertising, grade labeling can aid small business in the fight against monopoly. And since the free competition which is an essential part of the American economy will fly out the window when monopoly gets complete control, we think that's another score to chalk up for grade labeling.

The reader may judge from the tone of this discussion that we see grade labeling of lots of foods, textiles and other products right around the corner. Unfortunately, we don't. To get grade labeling on such a scale would require action by Congress. And Congress is overwhelmingly opposed to grade labeling. Too many Congressmen take orders from the big advertisers and their politically powerful friends.

Extensive grade labeling can come in another way, however, and that is through the operation of competition itself. Some canned foods are already government graded on a voluntary basis. If consumers buy, and when they can't find them, demand, graded products, more and more brands will be graded. And if consumers keep on demanding, they'll get grade labeled clothing and textiles, too—not grade labeled style factors, as the *Post* would have you believe, but grade labeled durability factors.

While all this is going on, however, keep an eye on Congress and your State legislature. For some dark night, one or the other may try to sneak over a law making grade labeling a criminal offense.

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3CU

Sulfa & Colds

No sulfa drugs for the common cold. That, in a nutshell, is the outcome of a series of studies by three distinguished medical men.

A recent issue of the *Journal* of the American Medical Association (January 1, 1944) carries an article by Dr. R. L. Cecil, Major N. Plummer and Dr. W. G. Smillie, reporting the progress made—and the dangers inherent—in the treatment of common colds with sulfonamides. The results are summarized in a few words: "This study affords evidence that the sulfonamides do not shorten or alter the course of the uncomplicated cold."

But even more significant than its specific references to colds are the general conclusions drawn, with respect to too-widespread use of the sulfa drugs:

"The evidence from this study and other studies is that toxic reactions on this dosage [3 grams daily] of sulfadiazine are rare but that they

can occur and must be guarded against. There is also the possibility of minor chronic pathologic changes occurring with sulfonamide therapy that may become significant following repeated courses of treatment. Finally there is a possibility of creating sulfonamide resistant organisms, a condition which . . . might be highly important. . . .

"During the past few years a number of reports on acquired sensitivity to sulfonamide drugs have appeared in medical literature. . . . It would appear quite well established that a few individuals acquire hypersensitivity to sulfonamide drugs and show their reaction by fever, skin rashes, nausea and vomiting and other manifestations. The occasional occurrence of this phenomenon presents another reason why sulfonamide drugs should not be used as a routine in the common cold. . . .

"On the basis of our experience we would restrict the use of sulfonamides to a very few selected cases"

CUMULATIVE INDEX

Each issue of the Reports contains this cumulative index of principal subjects covered since publication of the 1944 Buying Guide issue. By supplementing the Buying Guide index with this one, members can quickly locate current material and keep abreast of changes resulting from new tests. Page numbers run consecutively beginning with the January 1944 issue. Jan. 1-28; Feb. 29-56; Mar. 57-84.

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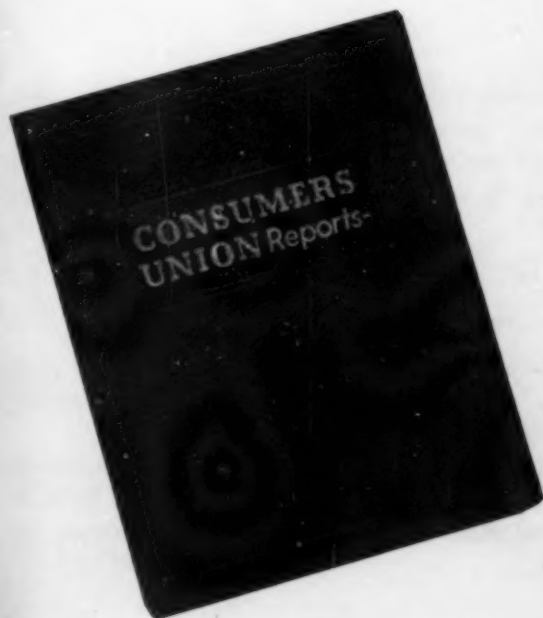
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